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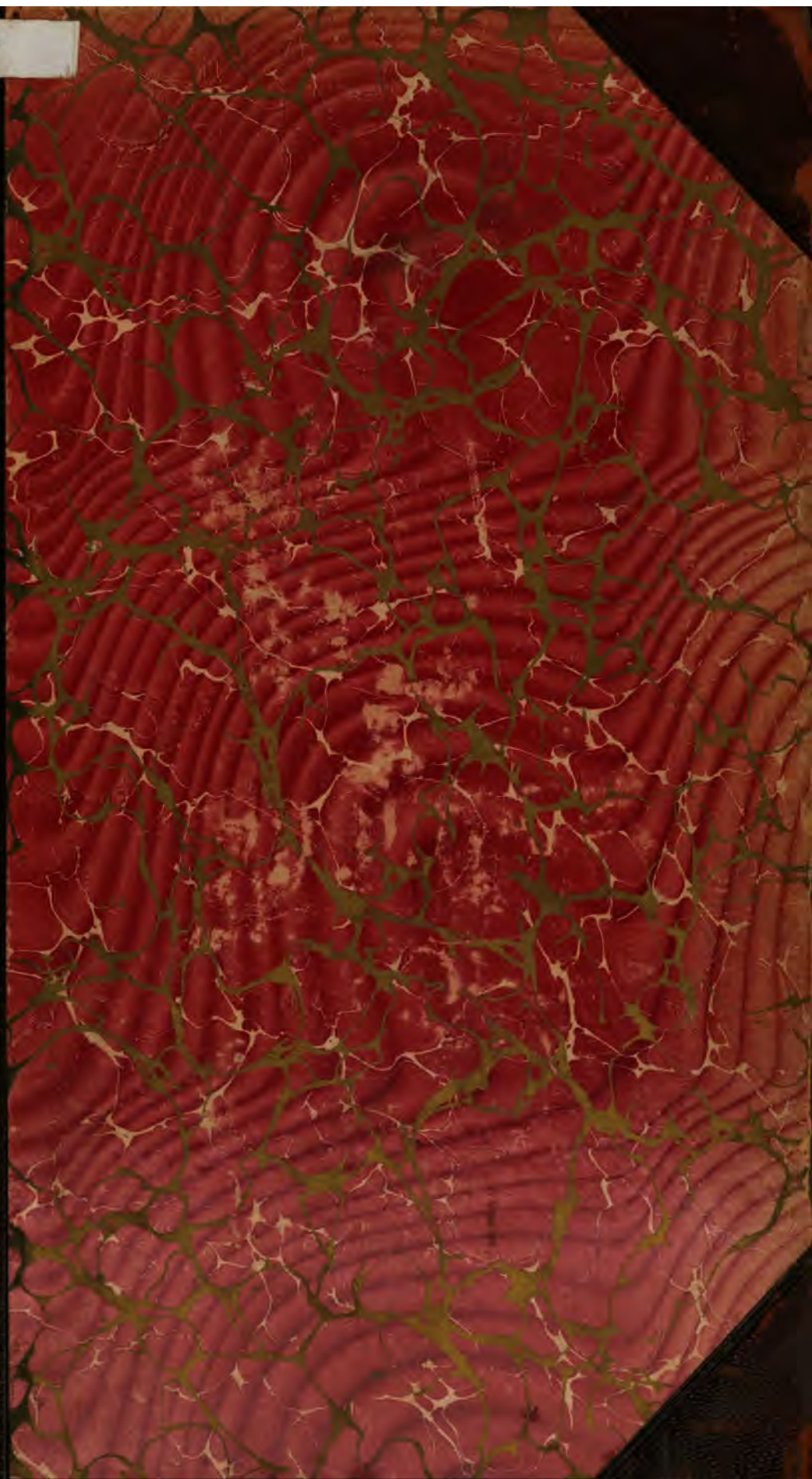
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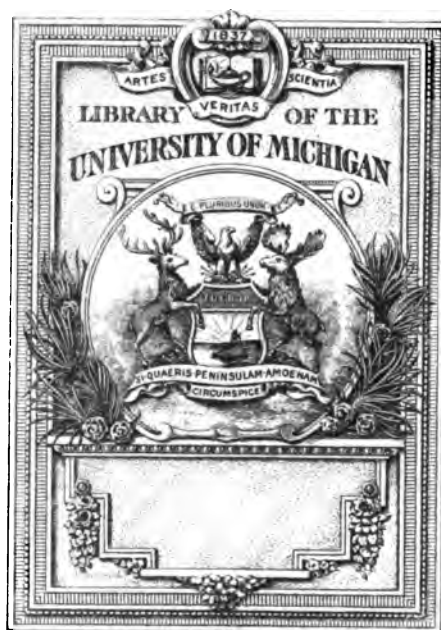
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THE
AMERICAN
Amateur Photographer.

94747

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JANUARY-DECEMBER, 1899.

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No. 281.

"ON THE LYNN CANAL, ALASKA."

By J. M. Foster.

THE
AMERICAN AMATEUR PHOTOGRAPHER.

Vol. IX.

JANUARY, 1899.

No. 1.

Improved Velox.

BY HENRY WENZEL, JR.



By Mrs. R. Wenzel.

"IN THE WELSH HILLS."

It is but a few months ago that upon opening a package of Velox paper one removed with the directions an additional enclosure having to do with the latest of Velox papers—portrait Velox. Through the medium of this circular each purchaser was asked by the manufacturers of the paper this question: "Have we reached the limit?" the inference being that portrait Velox was so decided an improvement over all previous Velox papers, and was so excellent a product, that one might well

suppose the limit to improvement to have been reached. Every worker can suggest what he deems an improvement to the manufacturer of almost every product he uses. Every manufacturer is aware of every improvement that we could suggest, and would gladly comply with our wishes were it possible to do so, but "the limit" for the time being has been reached. Some time in the future, when improved machinery and better raw products allow of a corresponding improvement in his goods, we shall find on the market just such a product as we now desire to obtain, providing, of course, there is a sufficient number of consumers, who think as we do, to create a paying demand for the article. In the matter of improvement in Velox papers, we had so many improvements in mind when we read



No. 252.

By N. W. Emmons.

"OLD LATOURETTE HOMESTEAD, STATEN ISLAND."

the question, "Have we reached the limit?" that we answered: "Not by any means." Velox had made great strides for a new product, and was being rapidly brought to perfection in the matter of minor details; yet notwithstanding that even in its infancy, and so its probationary period, it had displaced rival processes matured by years of experimentation and manufacture, and since its introduction had constantly been improved, still there was left in the way of improvement—

First, the doing away with the greasy emulsion used for carbon Velox and the substitution of one practically invisible; thus with the use of a paper similar to a fine drawing paper obtaining more of the platinotype effect.

Second, the lessening of both the sensitiveness and speed of portrait Velox, to bring this admirable paper into general use both on account of the marvelous latitude it allows in the matter of exposure and strength of developing solution and because of its unrivaled matt surface.

Third, the so manufacturing all Velox papers that they could be immersed in water before and after developing without detriment, thus obviating uneven development and the presence of bubbles.

Fourth—but this does not concern any of the Velox papers, but an essential to their perfect manipulation—there was yet lacking an acid-hypo bath that could be purchased at the same time that one purchased “M. Q.” developer, and which, if it were to be put upon the market, would assure the purchaser that all the chemicals he employed were not only such as the manufacturers advised, but also such as they guaranteed to produce perfect results if used according to directions.

Each and all of these improvements have lately been made; in fact, Velox papers have been improved to such an extent that were the new products put forth by a competitor instead of being in the nature of an improved product put forth by the original manufacturers of the papers, they would create as much stir among the users of Velox to-day as they created among the same people when, by the introduction of these papers, they found themselves emancipated from thralldom to the sun, the muss and fuss of washing and toning, and the dinginess and uncertainty of the dark room.

For the benefit of those who prefer to make up their own solutions, and who may not have the back numbers of this journal, I append



No. 265.

“A BIT OF TYROL.”

By Geo. W. Norris.

the formula as contained in the "M. Q." tubes as it appeared in the issue of February, 1898, as I am not aware that it has been published elsewhere:

Metol.....	12 grains
Hydroquinone.....	48 "
Sodium sulphite C. P. dried.....	192 "
Sodium carbonate " ".....	320 "
Potassium bromide.....	4 "
Water.....	20 ounces

[We have pleasure in endorsing everything that our correspondent has said in favor of Velox, and especially of the variety known as "special portrait." Instead of the sensitiveness, in the sense of requiring the most careful arrangement of the developer, both as regards strength and bromide, which characterized the earlier Velox papers, they now possess an almost unlimited latitude, as may be seen from an examination of the four illustrations on another page. The prints from which they were made are so nearly alike that not even an expert could distinguish between them. No. 1 was exposed for 20 seconds and developed in a solution full strength, *i. e.*, the contents of an M. Q. tube dissolved in four ounces of water. No. 3, 40 seconds, and developed in the same solution but with one grain potassium bromide added to each ounce, a quantity that would inevitably produce a greenish black on the earlier papers. No. 2, 30 seconds, was developed in one part of the full strength solution and one part of water, and No. 4, 60 seconds, in the diluted solution with the addition of one grain of bromide to each ounce.

In addition to the "M. Q. tubes," one of which costing 15 cents is sufficient for sixty 4 x 5 prints, the convenience of the users of Velox has been still further considered by the introduction of the acid fixing solution in powder form put up in a neatly turned wooden box, which only needs to be dissolved in water to make a pint of the solution at a cost of 15 cents, which will keep indefinitely and may be used till exhausted.

We recently received from the Nepera Chemical Co. a supply of the M. Q. tubes, acid hypo boxes, and packets of "Special Portrait," "Special Rough" and "Carbon" Velox, and have with them done, for us, an unusual amount of work in the direction of Christmas greetings, to our entire satisfaction; and as a result of that work and an examination of what of it still remains, we say with confidence that the photographer who follows the directions and fails to realize his ideal in printing, or who produces even two or three per cent. of waste, must look for the cause elsewhere than in the material or paper.—EDS.]



AN ILLUSTRATION OF THE LATITUDE OF VILON.

Clouds in Landscape.

BY HENRY R. MORTON.

AT the end of an article on "Clouds" in the August number I promised to continue the subject in September, but circumstances have prevented my doing so till now.

In the printing in of clouds the first step is the selection of a suitable negative, not always an easy matter if I may judge from the incongruities so frequently seen even in first-class exhibitions—clouds not only unsuitable in their nature and combination, but frequently lighted from a direction different from that of the landscape.

A good method of preventing this latter anomaly will be found, I think, in "Beginners' Column" in the September, 1895, number of this magazine, which, briefly, is to mark on every cloud and landscape negative the season, hour and direction of exposure; thus: 9-19, N. x E., 7.30 a. m.; which tells us that the negative was exposed on Sept. 19 from north by east and at half-past seven in the morning; and it is



No. 184.

"LA PENITENCE."

By E. Bourke.



No. 268.

By Albert L. Sessions

"IN THE YOSEMITE VALLEY."

only necessary, to secure suitable lighting, to select two negatives as near to each other in their marking as possible.

A suitable cloud negative having been obtained, not only suitably lighted but with a density and distribution in keeping with the landscape, the next step is to make suitable masks for the upper and lower parts of the picture. This is most easily accomplished by standing the landscape negative against a window pane, pressing against it a piece of translucent paper—ordinary writing will do—and roughly tracing a pencil mark along the sky line. Paste this on to a piece of thick opaque paper the size of the outside of the printing frame, and when dry cut in two along the pencil mark, and mark the one "sky" the other "landscape."

Place the landscape negative and printing paper in the frame in the ordinary way, and either with paste or tacks fasten the sky mask on the outside so as to protect the sky, keeping its edge a little from the glass, so as to soften the line, by a little cotton wool. When the landscape is sufficiently printed, that negative is replaced by the cloud negative, the landscape mask placed over the printed landscape in the same way, and the clouds or sky printed.

It will be observed that the light in printing goes a little under the masks, but a few experiments will show just how much they should be

made to overlap so as to show no line of demarcation, and show also how much easier it is to do good work in this way than to tell how to do it. One thing must not be forgotten: it is that even after the selection of a suitable negative, much of the ultimate success depends on the depth to which the printing of the sky is carried. A depth that would be altogether inimical to a bright sunny landscape might be just the thing to give harmony to a dull or dreary scene, but it may be taken as an axiom that when in doubt print light, as for a great majority of ordinary landscapes a mere indication of a cloudy sky would be better than masses of well-defined, and especially dark, clouds.

A much simpler, and, in careful and experienced hands, equally successful method, is to employ, instead of masks, a soft black cloth, such as an old silk handkerchief or anything that will be easily pushed into any desired shape and keep it. The printing frame in this case is best laid flat, and while printing the landscape the sky is covered by the cloth arranged roughly along the sky line. When printing in the sky the printed landscape is protected in the same way.

I first saw this method adopted in the Helensburgh printing establishment of John Stuart, the celebrated Glasgow photographer and president of the late British convention, and the work being turned out was simply perfect. In my hands it answers admirably, but I hardly care to recommend it to the beginner, not at least in preference to the other and more complicated, as really good results come only after considerable experience, but it is well worth learning.

From the British Side.

BY A CAMERAMAN.

IF you belong to the "I told you so" class, as who does not in some degree at least, it will be marrow to your bones, as well as to those of your contributor "Watchman," to learn that the great Bennetto mountain at which you both smiled so often has brought forth a very small mouse.

Over two years ago John Wallace Bennetto, of Newquay, in Cornwall, entered the lists as one more of the discoverers of photography in natural colors, and with claims greater than any of his predecessors; and attracted more attention and probably inspired greater confidence



"ON THE PICTURESQUE
NESHAMINY."
BY
C. R. PANCOAST.

than has fallen to the lot of any of the others, because he showed before both the Society of Arts and the Camera Club lantern slides that were really beautiful. But he passed them through the lantern himself and refused to let them out of his own hands, and therein he was no doubt wise, as an examination might have let the cat out of the bag sooner than he intended. He claimed that the beautiful pictures were made by one exposure in the camera, and that they were as easy



By Mrs. Claude Gatch.

"MIRROR LAKE."

to produce, and as certain, as an ordinary silver print; and that the colors were not the result of the application of pigments in any form, but of chemical manipulation. To back this up he got a committee of artists—he always kept photographers at a distance—to make a colored sketch and watch him while he photographed it blindfolded, and next day showed them the colored positive, which they admitted was fairly like the original.

From then till now the secret has been kept with only an occasional hint that the method was being perfected, that a syndicate with a



"A GOOD EXAMPLE OF
PROFESSIONAL PORTRAITURE."
BY
PHILLIPS, PHILADELPHIA.

big capital was being formed to exploit it, and that an American millionaire had agreed to give fifty thousand pounds for the patent rights in that country. But alas! "the best laid schemes of mice and men gang aft a'glee." The "jewel" which Bennetto declared he had turns out to be simply a modification of the three-color process, and his pictures are produced by the well-known method of superposing three colored films.

He produces, or claims to produce, the three negatives by one exposure in the following way: One plate, sensitive to red, is placed in the ordinary way in the focal plane of the lens, and between it and the lens there is a red glass at such an angle that while the red rays are transmitted the green and violet are reflected upwards. In a suitable slide at the top of the camera are two plates, sensitive to the violet and green respectively, and placed film to film. The lower of these absorbs the violet and transmits the green, which in turn is absorbed by the upper.

From the three negatives thus said to be produced prints are made on colored carbon or pigment tissue, the red on blue, the green on red, and the blue on yellow. The three colored films are superposed in the well known way and bound up in slide form.

You will be better able to judge than I, but it seems to me that Bennetto has hit on little that is new, and I *hae my doots* as to whether that little be true.

I know now why you have written so much and so often against bare glass in lantern slides. Mr. H. Snowden Ward showed the representative collection that he had made during his recent visit to America at a meeting of one of our societies. Some of them were colored, and although, as you know, here colored slides are reserved for the young folk, it was generally admitted that where the subjects were well chosen the results were beautiful. The prevailing fault of the uncolored slides was want of gradation, too great contrast between the lights and shadows, resulting in hardness or even harshness. But this, it was explained, was peculiar to American slide work, taste there leaning to brilliant whites, although some of the slides showed that the influence of English work was making itself felt in America.

I do not know how it is on your side, but the pessimistic declaration that photography here was on the wane has, by the opening of the Yorkshire Exhibition, now being held in Bradford, received a rebuff that it will not get over for some time. On the opening day no less than 3,734 persons passed the turnstiles, and during the evening pho-



"ON THE
ST. FRANCIS RIVER."
BY
W. B. TOWNSEND.

tographs to the value of thirty-five pounds—\$175—were sold. It is gratifying to see that the number of sales at photographic exhibitions are gradually increasing, especially as it will be noticed that the amateur generally places his prices considerably higher than those of the professional, because it shows that the amateur is progressing in artistic ability, and that the buying public is learning to appreciate artistic work.

The World-Wide Photo-Exchange.



By Dr. G. W. Frederick.

No. 116. "PLAYMATES."

ASTING our eyes over the latest monthly list of this interesting association we can see that, although not yet a year old, it has done, and is doing, a great deal of good work, and that it only needs to be still more widely known and still better understood to do a great deal more.

We noticed the World-Wide Photo-Exchange, although perhaps not so fully as it deserves, in our June number, and wish now to remind our readers of what we said then, and also to some extent to show the benefits that accrue from membership. The object of the Exchange is to bring together amateur photographers from all over the world, to give them an opportunity of exchanging ideas and pictures; to correspond regarding formulæ, methods, material and apparatus, and indeed to give to all, and especially the dwellers in the smaller villages, as far as possible, the society privileges enjoyed by residents of the larger cities.

This is sought to be obtained, and so far with considerable success, by the issue to each member of a monthly circular containing the names and the numbers by which will be afterwards designated all who have joined within the month, and along with each name such particulars as he or she desires to communicate to their fellow members, including the size of prints and sometimes the general nature of the subjects they can supply or wish to get in exchange.

The only expense connected with membership is a fee of twenty-five cents, to be paid in advance, and for which for twelve months the monthly circular or list will be regularly mailed. Copies of all the circulars that have been issued are in stock and will be supplied to new members on application.



"MT. JEFFERSON."
BY
MRS. CLAUDE GATCH.

From those circulars, and from the current ones as they come, members obtain the addresses, and, as it is understood that the fact of an amateur joining implies his willingness to enter into correspondence and to exchange ideas and prints with any of his fellow members, there need be no hesitation in opening a correspondence. It goes without saying that such exchange of ideas, and especially of prints, will be powerful factors in the progress of the members. Each will be able to compare his work with that of others, and whenever he sees something that is new or that particularly takes his fancy, but which he may not quite understand how to obtain, the knowledge may be got by the outlay of a two cent stamp—or let us say four cents in stamps, as it should never be forgotten that when a favor is asked a stamp for return postage should be enclosed.

The courteous secretary of the World-Wide Photo-Exchange is F. R. Archibald, of Rock Creek, Ohio, from whom all necessary information as to membership and blank forms of application may be obtained. We heartily endorse the association and recommend the thousands of our readers whose circumstances or location prevents their belonging to such societies or clubs as are found only in the larger cities to join its ranks.

The Contribution Box.

PIN HOLES AGAIN.

I HAVE tried all kinds of opaque and brushes, but with me they always do too much, leaving a white spot on the print. I use a sharp pointed knife and make a series of light cuts through the spot, then fill up with the retouching pencil. In this way I can fill up and leave the spot the same tone as the rest of the negative.

J. D. LONG.

STRAY THOUGHTS.

To the Editors:

Like an old darkey I once heard of, I occasionally "have a thought," and when I do, it generally worries me until I unload it on somebody else. This time I am going to make you the victim of two or three persistent ones on the subject of our mutually loved photography, and if perchance you find a grain of wheat among the chaff, which will help to feed the amateur multitude, it is yours to use or discard.

Don't you believe that wherever the lot of the amateur may be cast, or however unfortunate his environment may appear from an

artistic standpoint, yet there is around him enough of the artistic to employ his time and ability, if his eyes are but open to perceive it? I believe it firmly, and it is a comforting thought to a dweller in a dingy, smoky city. Even in the city slums, where man has apparently labored to destroy all that is beautiful and pleasant to look at in nature, and himself with the rest, there is almost always to be found a character, a group or a ruin that will make a picture, if the amateur has but the ability to pick it out. So I believe that those of us who are of necessity shut off at least most of the year from the beauties of mountain and forest and ocean and stream—or whatever our environment—need but to strive and study to see the pictures going to waste around us, to find sufficient material for our use.

I would like to say a good word for the old-fashioned detective or box form of hand camera. After trying a number of sizes and forms, I at last picked up an old $3\frac{1}{4} \times 4\frac{1}{4}$ No. 3 Kodak Jr., which, fitted with plate attachment, gives me more pleasure and better satisfaction and service in every way than any hand camera I ever used. I can carry it under my arm without attracting special attention, and be instantly ready for a snap at any interesting scene, and thus save some that would be lost if I had to take time to unlimber any other form of camera, or attract the attention of all around by a brilliant display of shining brass, polished mahogany and red morocco. I like the $3\frac{1}{4} \times 4\frac{1}{4}$, because of its artistic proportions, its lightness and portability, its convenience for slide making by contact printing, and the cheapness of supplies. To me the square photograph appears the least artistic form possible. I seldom see a 4×5 print that might not be improved by trimming down to at least $3\frac{1}{4} \times 4\frac{1}{4}$; or a 3×3 square, to 2×3 or smaller. I think the cause of artistic photography has been materially injured by the introduction by the manufacturers of so many square sizes in small cameras.

Every holiday season I am pained and saddened by the display in the windows and on the counters of the book and department stores, and even of some of the better class of art stores, of innumerable cheap travesties on art, in the form of nasty colored, gaudily framed photographic prints, many of them semi-naked—"nude" does not express it. I am ashamed that photography should be degraded to the manufacture of such abominations. They seem to me infinitely worse than the cheap chromo of a decade or so ago, and I cannot understand how anyone with a particle of civilized love of the beautiful can regard such monstrosities as ornaments.

I have never possessed a lantern of my own, but am just now suf-

fering with a severe case of "lantern fever," which I think can only be cured by obtaining a lantern; therefore, will appreciate all that you or your contributors may have to say on the subject of lanterns and slides, as I have been profiting recently.

Yours, with great respect,

W. C. FURNAS.

Notes.

THE KODAK LIMITED.—The progress of the company founded in Rochester, by George Eastman, is like a fairy story; more wonderful indeed, and if foretold not very many years ago, would have seemed less likely of accomplishment than anything imagined by those story tellers.

Beginning with the making of a few dry plates in the leisure hours of one engaged in a profession altogether unconnected with photography, it has made its influence felt in every quarter of the globe where civilization has gained a footing, and that, not so much by supplying a demand, as by making a supply create one.

The value of a catch phrase or sentence is well known, but surely it was never so strikingly demonstrated as in the results of "You press the button, we do the rest." But even that, combined as it was with the mystery of the word "Kodak," would not, unless backed by something even more powerful, have led to such an unprecedented success. That something more powerful is found in the energy of Mr. Eastman and those that he gathered around him and the quality of the material and perfection of the apparatus manufactured by the firm.

The little acorn planted in Rochester has grown into a great oak with roots in Great Britain, France and Germany, and branches, as we have already said, spreading all over the world, until it has amassed property and material valued at \$2,808,620, exclusive of good will and patents, which, exploited as the company can exploit them, are valuable beyond computation; and gives employment to about 2,000 people. Some idea of the magnitude of the business may be formed from the fact that the profits for the half year ending June 30, 1898, amounted to over \$517,295.

Before this reaches the eyes of our readers the various companies in Rochester, London, France and Germany will have been consoli-

dated and formed into one large company, the "KODAK LIMITED," with a capital of \$8,000,000.

A profit of \$517,295 in six months by one firm—because practically they have always been one—does not look as if amateur photography was beginning to be played out; and yet there are weak brethren of the professional persuasion who ever and anon propose to shut off the amateur by inducing the manufacturer and dealer to refuse to supply him with the necessary apparatus and material unless under prohibitive conditions—a job as difficult as the classical sweeping back of the advancing tide by an equally sagacious individual. Truly there are some facts more wonderful than fiction.

LENS APERTURE.—In a lecture before the Edinburgh Photographic Society, J. Warrack, Jr., gave the following useful advice: "Another point is lens aperture. In my own practice I almost never use a stop, outdoor or indoor. It is quite difficult enough to suppress superfluous detail when you work at $f/8$, without embarrassing yourself with the square inches of irrelevant and distracting information that result from the use of a smaller aperture. Of course there must be occasions when your objects of interest are not all in one plane, and it may be necessary to use a stop. But, as a general rule, use the full aperture, and you will find yourself forced to study the primary artistic problem of the simplification of the interest of the picture. Only a few objects can be in the plane of focus; you will have to select these objects carefully; the fewer the better. In a good picture you see only one thing; in a bad one, five, twenty, or a hundred. You have less temptation to crowd in miscellaneous accessories if they can only be indistinctly shown. So you make a good start by simplifying the elements of your picture. In social life the bore is the man who keeps telling you things you don't want to hear. It is the same with pictures; nothing disgusts us more than over-elaboration. The more you keep to suggestion and avoid explanation, the more you capture the imagination of those who see your pictures. The fewer words you can tell a story in the better will it catch on. Let your picture be too empty rather than too full."

BACKING PLATES.—Notwithstanding the many good "backings" that are on the market, the desire for something that while requiring only to be poured on and off like collodion, shall dry rapidly and be easily removed, keeps experimenters at work. M. Sol, in a communication to one of the French societies, recommends the following, which should be fairly satisfactory; To a 3 per cent. solution of mas-

ticated Para rubber is added sufficient red ochre to make it sufficiently opaque—about 3 per cent. This should be of the consistency of a thickish syrup, and may be poured on the back of the plate and off again, leaving a sufficient coating which will dry in a few minutes and be at least equal to any other backing as a preventive of halation. Its removal is easily effected by rubbing with the points of the fingers, during which it curls up into little rolls and falls away, leaving no stain nor soiling the hands.

CHEMICAL VIGNETTING.—Mechanical vignetting, especially where only a single print is required, is rarely satisfactory, and often entails the loss of several sheets of paper before the best vignette is arranged. M. Gosselin, at a meeting of the du Nord Society, strongly recommended its being done after printing and by chemical means. He employs a solution of iodine, consisting of water, 100; potassium iodide, 10; and iodine, 2 parts—say, water, one ounce; potassium iodide, 50 grains; iodine, 10 grains. The silver print, preferably by development—although printed out and even gold toned may be treated—is moistened and laid on a sheet of glass larger than itself, and whatever is wanted removed is painted over with a brush charged with the solution. It will be evident that in this way the operator has full control of the action, and can remove or reduce any desired portion. The action is instantly stopped by a plunge into water, and the print must be again fixed and washed.

PHOTOMICROGRAPHY.—It will be remembered that about a year ago we noticed that Professor Elmer Gates had adopted the old method of employing two microscopes, magnifying the image of the one by the other. The notion was not received with favor by microscopists generally, but he has continued his experiments, and, according to an article in the *American Monthly Microscopic Journal*, with great success. He has established, to his own satisfaction, that with two objectives of lower power and comparatively small cost, he can get greater magnification and better definitions than with one much higher and vastly more costly; while under ordinary circumstances the limit of magnification in photomicrographic work has been about 10,000 diameters, he has already obtained evidence of "being able to photograph a magnification of over 3,000,000 diameters," and adds, "I am satisfied that 10,000,000 diameters can easily be photographed."

This enormous magnification entails the employment of a heliostat, which he is constructing for the purpose, the mono-chromotizing of the light, and the exclusion of dust particles and aqueous vapor glob-

ules, all of which are being provided for in the apparatus under construction. All very wonderful, no doubt, but we shall like better to see it done than to hear about it.

Right or wrong, the energetic professor deserves credit for his perseverance, and should not suffer, as surely he will, from the mistaken zeal of the editor of the magazine in which the notice of his work appears. The opinion of an editor of a scientific journal, who can characterize a co-laborer's writing as the "frothy talk of a superannuated microscopical editor," is not likely to be rated very highly.

NEW TONING BATH.—The new addition to the toning bath proposed by A. L. Henderson, and elsewhere alluded to, is sodium formate, and is to be substituted for the ammonium sulphocyanide so generally employed in Britain; and it is said to give beautifully pure whites without tendency to the double toning so frequently complained of. It may be used either in a combined bath or by the separate solution method. A suitable formula for the former is:

Sodium hyposulphite.....	1 ounce
Sodium formate.....	20 grains
Gold chloride.....	1 grain
Water.....	8 ounces

For separate solutions the toning solution is:

Sodium formate.....	20 grains
Gold chloride.....	1 grain
Water.....	10 ounces

The prints are immersed in salt and water and rinsed in plain water before being placed in the toning bath, and the fixing is done in a 10 per cent. solution of hypo. Platinum may be substituted for gold, but in that case the bath must be slightly acid.

EQUIVALENT FOCUS.—It was a good idea to have the first of the Trail Taylor Memorial lectures on Optics, as what may be called the practical side of that science had been his especial hobby long before he ever thought of being in any way connected with the literature of photography. While recognizing the value of the lecture to those interested in the higher phases of optics, we should have preferred something more practically interesting to photographers generally, as there is hardly anything connected with the practice of photography that they know so little about as the lens.

There was, however, one almost incidental observation which may be turned to practical account in ascertaining that most essen-

tial feature of a lens, its equivalent focus. Mr. Dallmeyer said that the pinhole camera affords a ready means of ascertaining fairly accurately the focal length of positive lenses or lens systems, and gave a formula by which, by comparing the sizes of the images formed by the pinhole and a lens, the focal length of the latter would be shown. But ordinary photographers will find it easier to photograph with the lens, the focal length of which is to be ascertained, some brilliantly illuminated object and accurately mark its size on the focusing screen. Then substitute a pinhole for the lens, and slide the camera out and in till the object is exactly the same size. The distance between the pinhole and the focusing screen will be near enough for all purposes the focal length of the lens.

PARIS EXHIBITION.—The good news comes from France that the executive of the Paris Exposition to be held in 1900 has refused an offer of \$200,000 for the sole right to photograph within the gates, and will give the permission to all alike on the payment of a daily or periodical fee. Those who remember the trouble and dissatisfaction with photography at the Chicago "World's Fair" will admit that "they do some things better in France."

Words from the Watch Tower.

BY WATCHMAN.

TRYING to keep everybody right is always hard and sometimes thankless work. Doctors are proverbial for differing among themselves, but surely there is no room for their differing from all who are not doctors on a question that has only one side and therefore is not a question at all.

The question that is not a question, but an established fact, is that the value of a stop depends entirely on its relation to the focal length of the lens; that, say, $f/16$ may be as small as the fountain pen with which this is written—I wish somebody would tell me where to get a good typewriter at a small price—or as large as one of the dollars I expect to get for writing it; but it tells the same story, which is all that we need to know; while to speak of a stop as being one-sixteenth or a quarter of an inch conveys no information at all. And yet this is just what Dr. R. W. Shufeldt does in an otherwise very interesting article in the *Photo Era*, the avowed object of which is to show how he so successfully photographed living fishes in aquaria and to incite others to study and experiment in these fields.

In reference to one of the illustrations he says, "I made a fine second exposure upon a medium sized blackfish in the next tank, with an excellent result, but on trying it again with *a one-sixteenth* of an inch diaphragm instead of *a quarter*, and giving *ten* seconds, the result showed *under exposure*," which of course, leaves the reader as wise as before he began.

Angle of View and Its Influence upon the Photograph.

BY JOHN A. HODGES, F.R.P.S.

ALTHOUGH the subject of "angle of view" is one of extreme importance to photographers, the principles which govern it appear to be by no means properly appreciated, if an opinion may be formed by the bad drawing, and evident misuse of the lens, which is so apparent in many photographs. Indeed, it is not exaggeration to say that in the majority of photographs too large an angle of view is included to permit of the best pictorial effect. This is due to the fact that lenses of too short a focal length are commonly employed, the photographer having, when purchasing, probably been guided by the statement that a lens of a certain focus will cover a plate of a given size.

First of all we are met by the inquiry, what is meant by the term "angle of view"? and we will endeavor to answer the question from the practical photographer's standpoint. Briefly, it may be defined as the amount of subject included upon a plate of given size by a lens, the amount being governed by the relationship between the focal length of the lens and the length of the base of the plate. The shorter the focus of the lens the wider the angle and the greater the amount of subject included; conversely, the longer the focus the narrower the angle and the smaller the amount of subject included, presuming, of course, a plate of the same size to be used in each case. The reader may easily determine for himself, without resorting to abstruse mathematical calculations, the exact angle of view subtended by a lens. To do so, draw upon a piece of paper a vertical line ab , which must be exactly equal in length to the equivalent focus of the lens the angle of which it is desired to ascertain; then, at right angles to the line ab , draw the line cd exactly corresponding to the length of the plate. The angle formed by drawing lines from a to c and from a to d is the angle of view given by the lens in question on that particular size of plate, and it can be at once read off with an ordinary protractor. This simple calculation should be made with every lens the reader pos-

sesses, because the information so gained will be very useful to him in his practical work.

It is necessary, in order to make a lens cover a wide angle, to give its surfaces deep curves, and lenses so constructed are termed by opticians "wide-angle" lenses; but such lenses only give a wide angle when used on plates that are long in relation to their focal length, or, in other words, when used subject to the conditions stated above. As a practical example of this, if we take the wide-angle rectilinear of Dallmeyer of $5\frac{1}{2}$ in. focus and use it upon a 12 x 10 plate, we shall produce an image subtending an extremely wide angle; but were we to use the same lens on a quarter-plate, it would at once become a narrow-angle lens and would only give the same angle of view as any other type of lens of similar focus used upon a plate of the same size. Therefore we must not simply be guided by such terms as "wide angle," but in selecting a lens for a particular purpose we must have regard to its focal length and that of the base line of the plate upon which it is intended to be used. Sometimes the question is asked whether diminishing the size of the stop will increase the angle of view. The origin of this popular error is possibly traceable to lens makers' catalogues, in which the statement is sometimes found that "the use of smaller stops will increase the angle of view." The explanation of the statement is this: lenses of the older forms with more or less round fields, and exhibiting astigmatism when used with large apertures, only give good definition over a limited portion of their field, but by using smaller stops the area of good definition can be extended. In this way a larger plate can be effectively covered by using a small stop than could be covered with a large aperture, and consequently (the substitution of a small for a large stop does not, in a properly corrected lens, alter its focus) the lens when so used will then give a wider angle, but the mere alteration of the aperture by stopping down will in no way affect the angle of view on the smaller size of plate.

Practically this question of angle of view is a very important one to the photographer, because, as we have already pointed out, it involves the question of perspective. Used on a plate of a given size, the shorter the focus of a lens the smaller will be the image of an object at a given distance from the camera, and when a short focus or a wide-angle lens is used under certain conditions an exaggerated effect of perspective is produced, which is false and displeasing. For instance, if we use a very short focus and consequently wide-angled lens on a view which has some prominent object in the near fore-

ground, the foreshortening effect produced will often be so violent as to be both displeasing and unnatural. This is particularly noticeable in some architectural photographs, where the attempt has been made to include too much of the subject. For such work, if the desire be to secure a pictorial rendering, the use of a wide-angle lens should be avoided as far as possible, and when circumstances compel its employment much discretion and judgment in selecting the point of view is demanded.

In landscape work also the wide-angle or short-focus lens tends to exaggerate foreground objects and to unduly dwarf distant ones. The pictorial quality of photographs generally would be higher if lenses of longer focus and narrower angle were used more frequently than they are, and it will be found that those photographers who excel in the purely artistic merit of their photographs almost without exception use lenses of more than what may be called average focal length, or, in other words, include only a narrow angle in their pictures.

It is very desirable, however, that we should be able to select our subject, including or rejecting this or that portion of it according to what our ideas of the most suitable composition may be; to have, in short, full control both of the selection of point of view and the amount of angle included. It is really surprising that photographs in general are as good as they are when we consider the difficulties of obtaining a satisfactory and true rendering with so limited a control over the tools usually employed. But the effects of the endeavor to make one instrument serve for all occasions, and for all classes of subjects, is all too evident even in the work of many of those who stand in the very front rank of artist photographers. Particularly noticeable is this in the case of what are known as "foreground subjects," generally taken in flat or marshy country in which it is an everyday thing to see weeds, rushes, and even grass apparently of Brobdignagian proportions as compared with objects situate in the more receding planes of the picture. This false drawing, for it is nothing else, is caused by the employment of lenses of too short a focus which has compelled the photographer to approach close to his subject in order that he may give sufficient prominence to it. In most cases a vast improvement would have been effected by the use of a longer focused lens, for it would have necessitated the removal of the camera to a point some distance away from that portion of the view intended to represent the foreground.

Applying what has been said to everyday practical work, it will be evident that the possession of several lenses is essential if the

photographer would be independent of his tools, and free to exercise an untrammelled judgment in the selection of point of view, and in the perspective of his pictures. As a rough guide to the number and the foci of the lenses selected, we should say that three would form a useful battery, their foci being approximately as follows: (1) equal to the base line of the plate, (2) not less than one and a half times the base, and (3) equal to twice the base line.—*The Amateur Photographer*.

Our Portfolio.

[Prints sent for criticism -not more than one at a time—should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*, and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in THE AMERICAN AMATEUR PHOTOGRAPHER.]

No. 238. F. S. THOMPSON.—No. 1 is a fine subject from a fine point of view, except that the lens should have been lower so as to give just a little more of the beautiful and suitable foreground. A winding stream of finely rendered water crossed in the middle distance by a high rustic foot bridge, even the straight lines of which, contrasting as they do with the curving foliage lined banks, are not objectionable; while over all there is the crowning glory of a beautiful cloud-land. The only fault, in addition to the slight lack of foreground, is the unnatural darkness of the foliage on the left. This could be remedied by working on the negative, or by dodging the printing, as recommended by Florence Livingston on page 264 of our June, 1897, number. Without such alteration the present print will be much improved by trimming one-fifth from the left, which we shall do and reproduce it under the title of "The Foot Bridge." We may add that the obtrusive white initials and date are an objectionable feature.

239. A. F. ATKINSON.—"Panning Out," a little girl at play with a tin pan, a trowel and a quantity of broken stone or lime, is an example of perfect technique; in every respect a perfect photograph, although both pose and expression are evidently artificial. That is, she knows she is being photographed and has assumed a position and expression foreign to those natural to a child at play.

240. F. P. STREEPER.—"The Brook" is a fine example of picture making by photography. A sluggish stream winding through a marshy foreground, fine trees on the right supported by an atmospherically dimmed distance, and over all a beautifully clouded sky, make a faultlessly charming composition that it would have been difficult to

improve. It is also one of the best proofs of the value of long focus lenses in pictorial work that we have seen. We shall have pleasure in reproducing it.

241. ELIZABETH C. WHITE.—“Their First Appearance,” a duck with ducklings just hatched, is a very good photograph and a proof that you are quite able to tackle more interesting subjects. We shall reproduce it as an example of perfect technique.

242. ANDREW EMERINE, JR.—“Scrub Day,” two men cleaning a boat, although a very fine photograph, is not, as a picture, nearly up to your usual mark. All that there is is seen at a glance, and there is nothing left to think about. Composition and lighting are unobjectionable, but suggestion is lacking, and that is one of the essentials of a photographic picture.

243. T. E. V. SMITH.—“Mother and Foal” indicates lack of patience on the part of the photographer, as the horse is in about as bad a position, pictorially, as it could well be, and should not have been so near the tree. The photography is satisfactory, and by watching and waiting something very much better in the arrangement of the animal would surely have been secured.

244. W. A. FORTE.—No. 1, “A Village Street,” would have been better from a little more to the left, so as to show a little of the right side. It has been taken with a lens of much too short focus, exaggerating the foreground and giving an apparently false perspective, and it is too flat, lacking in contrast. To obviate this give a longer exposure and add more bromide to the developer, and especially choose a time when the subject is suitably lighted. The picture, however, very well conveys the idea of a dull, gray day, although that is somewhat antagonized by the sunshade over the window on the left.

245. ARTHUR B. HOLLISTER.—“Peek-a-boo” is another print from the negative of that already noticed as 183, but on glossy instead of platinum paper. There is naturally in this a little more detail than in that, but of course no greater tonality. No kind of paper will give gradation from an under-exposed negative. As we said before, with two or three times the exposure this would have been a pretty little picture.

246. HUGH C. WILSON.—“Solitude” is a fine photograph but from a pictorial point of view has two serious faults. The foreground, the boat and the middle distance present three parallel lines without balance or contrast, and the sky and water are simply white or nearly white paper. This is just the kind of print in which it would have been easy to print in the clouds of your “Cloudland,” but the three

straight horizontal lines running almost right across the print is inimical to pictorial effect.

247. MARY C. WALSEY.—“At the Pump” has only one fault, but it is so serious as to render the print practically worthless—it is under-exposure. The idea and the composition are satisfactory, and the lighting, *i. e.*, the direction in which the figures are lighted, could not have been improved, but from insufficient exposure and forced development everything that is not white is simply black. With two or three times the exposure this would have been a very good picture.

248. JOHN H. SCOTT.—“A Fair Breeze” is a satisfactory marine view, with one rather serious fault, too short exposure. The contrast between light and dark on the sail is unnatural and far too great. With a better light or the employment of a larger stop it would have been a fine picture.

249. R. F. ANDREWS.—“Below the Dam.” This is a good subject from a fairly good point of view, although it would have been better if the weir had not run so straight across the picture; but it is simply worthless from under-exposure. It is simply white and black without a trace of tonality.

250. E. BOURKE.—“The Path to Peace”—so called because it leads to a retreat of the Jesuits—is a well composed picture with a fine, cloudy sky, but sadly in want of a very much longer exposure, water on the right being simply white paper, and trees on the left mere black silhouettes. With a long enough exposure this would have been a charming little picture. “La Penitence,” 184, has come much improved. We shall reproduce it.

251. C. H. CLARK.—“Sunset,” when exposed, was doubtless a glorious scene, but the glory is not suggested by the photograph. In consequence of a very much too short exposure there is an entire absence of tonality, the only thing on which the beauty of such a scene depends. There is no use in snapping such subjects, many seconds instead of small fractions of one being necessary for anything like a satisfactory reproduction.

252. N. W. EMMENS.—“Old Latourette Homestead” is an excellent example of one of photography’s most valuable phases, the reproduction of historical or otherwise interesting buildings or places, altogether aside from picturesque value. This was built about 1670 and was for some time the headquarters of Lieut. Col. Simcoe during the Revolution. As a photograph it is a little wanting in contrast; too uniformly gray for successful reproduction, but we shall reproduce it.

253. G. COVERT.—“Over the Hill” is a very attractive little pic-

ture with only one, and that the very unusual fault of too low a horizon. Motive, composition, lighting and everything else are satisfactory, only the lens should have looked a little lower. We shall have pleasure in reproducing it.

254. SMITH PHILLEY.—“Rusticating” is a fine photograph of a good subject that might have been made a much better picture. It follows the present fashion of giving a large expanse of foreground, which in this case is not warranted, as it is simply a tangled mass of uninteresting driftwood. Had the lens been raised so as to begin just above the long branch lying across, and the space below added to the sky, it would have been much better. Then the figures are too mechanically placed and too stiff. Much greater interest could have been given by bringing them together rather than placing them practically one on each side. You are on the right track, but must do much more thinking. There was in the subject nothing to warrant the face of the figure on the left being so very dark. A longer exposure, too, was necessary; the white branches are far from true in tone.

255. W. B. TOWNSEND.—“In the Woods” is a good subject from probably the best point of view; in every sense a good picture but for one serious mistake, the placing of the boy on the prostrate trunk in the middle of the print. The introduction of figures, even where they are needed, is always risky, and where they are not, as in this case, it is destructive of true pictorial effect.

256. E. S. NICOL.—“Wait for Me” is, as all pictures of children are when allowed to pose themselves, or rather when they are taken without any posing, a pretty little picture. The taller of two little girls has got half over a wire fence and the other is represented as in the act of calling the title. Everything is just as it should be except lack of true tonality, caused by insufficient exposure. Twice as long, or a lens working at twice the rapidity, would have been much better, and given shade as well as light on the white dresses. Negatives with such contrasts should be developed with solutions weak in reducer.

257. L. C.—“A Dusky Quintet,” a group of five young negroes kneeling on a grassy foreground with a background of young trees, is not nearly so good as it might have been. They are all staring at the camera instead of, as they should have been, concerned in some action amongst themselves. The straight line of the foreground is repeated by an equally straight line at the roots of the trees instead of being contrasted; and the negative is too weak from insufficient development. The exposure has also been too short.

258. RICHARD G. PECK.—“Winter Sunset” conveys to us no suggestion of winter or sunset, or indeed anything else except an under-exposed photograph. A perfectly black clump of trees on the left, a small tuft of equally black foliage in the middle, with an irregular patch of white on one side, and both tuft and patch reflected in a pool of water. A perfectly uniform tinted sky, and a foreground of what seems to be sand. It is not of itself picturesque, and as it suggests nothing it was not worth photographing.

259. E. S. WILSON.—“Green Pastures and Quiet Waters” is a fine subject from a good point of view, and an excellent example of Velox printing. The green pasture is there, both good and abundant, as is shown by the condition of the cattle, and the quiet waters suggestive of cool retreat from noonday sun, if such there were. But alas! there is no suggestion of the sunny effects, the essential condition of such a picture. So false is the tonality that the water that should have reflected the shimmering light is simply black paper, as is every shadow in the composition. If ever there was a subject to which the old adage, “Expose for the shadows and let the lights take care of themselves,” is peculiarly applicable, this is it, as its only fault is under-exposure. Twice or thrice as much would have been required. “Summer Day” next month.

260. H. G. WILSON.—The portrait is very much under-exposed. Twice as long would have resulted in a good average professional likeness, but nothing would have made it a good picture with such a towering mass on the head. Professional photographers must, most of them at least, please their patrons, but surely no amateur who works to please himself should spoil a pretty figure by such headgear. If the tall hat *must* be photographed, it should be represented by something else than black paper.

261. J. M. FOSTER’S “On the Lynn Canal, Alaska,” is a beautiful photograph and fine picture, giving a better idea of that part of the country than anything that we have yet seen. On the right a steep mass of rugged rock, nicely balanced and supported by a boat and figures on the left. In the middle distance a bleak mountain-side, and behind it a part of the snow-clad Dyea, of which we have recently heard so much. We are able to reproduce it through the kindness of our esteemed correspondent, Mr. H. Wenzel, Jr., and may add that the print is a fine example of printing on “special portrait Velox.”

262. F. L.—“A Cloudy Day” is a well selected subject of which a very good picture might have been made; but instead of suggesting a cloudy day it suggests to us only a print from a very weak nega-

tive, without even a trace of detail or contrast. There is a triangular foreground, a triangular distance with an unbroken line in low tone suggesting water, but the two triangles are simply unbroken darks giving no indication of what they may be. Silhouettes of a large tree in front and a small tree behind complete the composition, which, as already said, properly photographed, might have made a fine picture.

Letters to the Editors.

WIDE-ANGLE LENSES.

GENTLEMEN: I have noticed an inclination of the A. A. P. to recommend at every opportunity a lens for picture making, "whose focal length is one and one half times that of the picture. While this is quite proper for portraits, figures or movements, it is entirely inadequate in my experience for general outside work.

I have just examined 100 consecutive negatives of my collection, which consists of street scenes, cities, lakes, mountains, etc., all old landmarks that have been photographed hundreds of times, and I find that about one-third of these were made with a lens fulfilling your requirements, one third with a lens of focal length equal to that of the picture, two views with a focal length twice that of the picture, and the other third were made with focal lengths shorter than the picture, that is, "wide angles." The shorter lenses would have been used oftener had they been "fast" enough for my purpose. Now, if I had been armed only with the "long one," I would have had to pass more than half of these views without securing them, or be satisfied with fragments of them. You may say, Why not get far enough away from the subject to bring it all in range of the long one? I answer that that would have spoiled the composition or lost the foreground, or likely placed a row of houses on a mountain between the camera and the subject desired.

I will agree with "Photographer," p. 536, of your last issue, who wants to "reproduce things as he sees them," provided he will at the same time *reproduce what he sees*.

Yours very truly,

R. D. GRAY.

[We are quite at one with Mr. Gray. The wide angle lens employed with discrimination, which is just what he does, is a power in the hands of a discriminating photographer, and absolutely essential for some phases of work. What we fight against is its indiscriminate employment in *pictorial* photography, to most phases of which it is fatal. We possess one of the first, if not *the* first, wide angle lens that was made—constructed by Andrew Ross to the order of a wealthy amateur for the purpose of photographing the west door of Melrose Abbey, which could not be done by any lens then to be got—and have many valued photographs that but for it we could not have obtained. If we wanted to photograph the study in which we write it would be just the thing, but were we to employ it on the village street from our window the result would convey the impression that it is twice its width and only half its length.

Our contention has been for at least once and a half the length of the base line, but that twice that length, or an angle of 28 degrees, would be better; and we hope

to continue the plea, as, in addition to the *apparently* false perspective produced by lenses of short focus, they increase the difficulty of exclusion, one of the greatest difficulties that the pictorial photographer has to encounter.—Ems.]

LANTERN SLIDES.

DEAR SIR: Although I belong to a society that has been a member of the Lantern Slide Interchange from the start, I have no desire to take part in the controversy regarding its object and methods that has been for some time carried on in your pages and elsewhere, but rather to say a few words about what I believe to be mistaken notions as to the essential qualities of a lantern slide.

Slides are mainly of two classes, pictorial and topographical, and as they are most frequently employed to illustrate lectures or descriptions of places, peoples and happenings, the latter are very much more numerous than the former. With slides as with other printing methods, their nature and possibilities are determined by the selection of the negative. The subject, lines and lighting, and possible degree of gradation or tonality, are already practically fixed, and the work of the slide maker is confined to their reproduction. On paper he cannot get them all, and must be content with a compromise, but on glass it is easily possible and no slide in which they are not all present should ever be exhibited.

A slide may have *motif*, satisfactory arrangement of lines and suitable lighting—that is, lighted from the right direction; be in fact in every sense a fine picture except for lack of gradation or tonality; but if clear glass is in juxtaposition with perfect opacity, and everything that is not black looks as if covered with snow, it is not worth showing. On the other hand, a simple reproduction of a topographical subject, no matter how destitute of what is sometimes called pictorial quality, if it includes true tonality—is full of what one of your correspondents calls the “between shades”—it will, on the screen, never fail to please the most cultured spectators.

From this it will be evident that the one essential quality of a lantern slide is technique in the sense of true gradation or tonality; then, as far as possible, accurate rendering of the various objects represented according to their degrees of luminosity, and that the first object of the slide maker should be to secure that.

True tonality first, and as much art as possible afterwards, is the motto of

Yours truly,

FRANK MARTIN.

Our Table.

THE ILLUSTRATED BUFFALO EXPRESS.—It is always pleasanter to praise than to blame. In a recent number of this excellent paper we considered it our duty to point out the faults of one of its photographic reproductions, because of the knowledge that those who knew no better were likely to suppose it an example worth working up to. Now we have pleasure in calling attention to the perfection and beauty of another, in every respect as fine a piece of work of the kind as we have ever seen. It is “Corn Husking,” by H. K. Noyes in the Nov. 20th number. As regards subject, composition, and lighting it is such a picture as would be an honor to any artist, and it is well worth the careful study of any one anxious to make pictures by photography.

A CHRISTMAS GREETING.—We have to thank George A. Custer for a substantial and much appreciated "token of appreciation for benefits received from 'Our Portfolio.'" It is refreshing in more senses than one.

J. C. METOL-HYDRO POWDER.—Carbutt's J. C. tablets have long been favorites wherever they have been employed, and their popularity has been greater perhaps than that of any other developing preparation. Their only fault was that they required crushing, and that if they were not reduced to tolerably fine powder the pressure to which they had been subjected made their solution somewhat difficult.

The proof that this has been completely obviated lies before us in the shape of a box of tubes, each filled with powder in a state of minute division, as easily dissolved as so much sugar, and sufficient for about a pint of normal developer at a cost of less than 10 cents.

The J. C. Metol-hydro powders take the place of the J. C. tablets and possess all their advantages without their one drawback. Those who have been in the habit of employing them know what those advantages are and will be glad of the change in form and the consequent easier solubility. Although dissolved in sufficient water to be ready for use, the Metol-hydro powder has excellent keeping qualities. As strong solutions generally keep better than when diluted, we prefer to dissolve the contents of one tube in only three ounces of water, and, just before using, dilute it with two, three or four parts of water, and as the result of many experiments we have no hesitation in recommending it as an ideal, and in every way satisfactory, developer for all varieties of photographic work.

PHOTOGRAPHIC MOSAICS FOR 1899.—This ever welcome annual, now in its thirty-fifth year, comes as usual filled with good things. Its editor evidently believes in quality rather than in quantity. Devoting the attention that some of his contemporaries give to the latter altogether to the former, he has made "Mosaics" generally, and especially the volume now before us, an apt illustration of the oft-repeated saying that "gude gear is aye in little bundles." He also believes in "when you have a good thing hold on to it," and hence the style and arrangement remain year after year unchanged.

The first section, over a hundred pages, deals with the progress of the year that is drawing to a close, and as usual he, to a large extent, lets those who led in the various steps speak for themselves. The skimming has been well done, and he who carefully reads those hundred pages will know all that is worth knowing of what has been done during the year.

The rest of the volume contains between 40 and 50 original contributions, many of them by some of the best known writers and recognized authorities on the subjects with which they deal; and not a few of them containing hints that to both professional and amateur are simply priceless.

But amongst so much good wheat the best of farmers will leave *some* chaff, and it is so here. We do not notice it in a faultfinding spirit, but as we so thoroughly endorse all, or nearly all, we feel bound to caution those, if such there are, who know no better, against several statements that, to say the least, are misleading.

Considering that it is now almost universally admitted that a wide angle lens should never be employed as such when it is possible to avoid it, it is rather startling to find it gravely stated in the first contributed article, pages 109 and 110, that with a lens of $7\frac{1}{2}$ inches focal length views may be perfectly taken on plates up to

10 x 12, and with equal perfection on 11 x 14, "excepting that once in many times some object in the foreground may locate itself in a corner of the plate, where it will be *a little off*, and necessitate a little trimming or vignetting." Such a statement is too absurd for discussion, and therefore we will only say, while a wide angle lens may be made to cover a plate of 11 x 14 inches, an angle on the base line of nearly 90 degrees, no photographer whose aim is pictorial effect in landscape work, and who knows how to reach it, will employ a $7\frac{1}{4}$ inch lens on anything larger than 4 x 5, and on a plate of 11 x 14 would never think of employing a lens shorter than 21 inches.

Less harmful, but apt to frighten the would-be carbon printers, is the statement on page 182, that it was necessary after the first transfer and before development to place the tissue for half an hour under the pressure of *two anvils*; and disappointment surely awaits the photographer of interiors who pins his faith on the assertion on page 189, that even on an unbacked plate freedom from halation will be secured by development with metol.

There are over 60 illustrations, mostly portraits of what may be called the fancy professional style, and mostly good of their kind; and there are some, such as those on pages 94, 152 and 196, that rank considerably higher, but there are also a few, such as those on pages 161 and 227, that may be taken as well worth avoiding.

But those little faults only help by contrast to enhance the value of the great mass of useful information and the teaching both by precept and example in "Mosaics of 1899"; and no photographer who wishes to keep abreast of the times, or who wants to know what his brethren are doing and how they do it, should be without a copy.

SOME NEW POINTERS AND OTHER THINGS, copyrighted by G. F. Mellen and apparently published by the Western Camera Manufacturing Co., Chicago, is really an amateur's notebook prefaced by a few really useful hints to young photographers, especially in the direction of hand camera work. It includes also a series of "Don't's," to which we feel constrained to add one more: Don't begin with a hand camera.

CAMERA NOTES.—The number of this always interesting organ of the New York Camera Club for January, 1899, is to hand, and, if that be possible, even more interesting than any of its predecessors.

We naturally turn to the illustrations first, always sure that we shall find something that will make us happier for the day, something of the "kiss and come again" kind which should be the object of all art, and we are never disappointed. Tom Bright's "Returning from the Pasture" is a picture after our own heart. We believe in the so-called canons of art, and while they should not be allowed to trammel the aspiring artist, we rarely fail to find them more or less observed in pictures that are to us especially charming. Whether Mr. Bright believes in them or not they are all here, and with an effect that is simply delightful.

Alfred Stieglitz's "Mending Nets" is a fine sermon on our favorite theme, the beauty of simplicity. There is, as some would say, nothing in it, and yet there is everything essential to a noble picture. We have said that it is a sermon, and might with equal truth say that it is also a text for several sermons. It is one of those pictures that once seen, *and understood*, is never forgotten.

W. A. Fraser's "Wet Night" is a feat in photography and an important feature in this number; practically a new phase of camera work, to the very top of which

the author of this picture has got apparently at a single bound, but perhaps he, and he alone, knows the amount of care and thought and study of which it is the charming outcome.

Of Charles I. Berg's "Magdalen" we can only say that it was a risky experiment, and that he has succeeded where so many fail. There is at once so little and so much between the naked and the nude that only he whose very soul has entered into the holy of holies of art may hope to reproduce the latter free from every trace of the former; and hence, although the proper representation of the nude is probably the very highest phase of human art, and gives to us a degree of pleasure far beyond any other class of picture, we are more than half willing to forego it rather than run the risk of thereby encouraging "fools to rush in where angels fear to tread."

The literary matter is as usual of a tolerably high order. A. Horsley Hinton makes a good and courteous plea for toleration in reply to a not particularly courteous attack on the class of work with which his name is frequently associated that appeared in the October number; Alfred Stieglitz shows both by precept and example how to improve the tonality of too hard lantern slides; and J. T. Keiley writes at considerable length and very well of the late Philadelphia Salon.

But there is a fly, perhaps a very little one, in the ointment. The "broad-mindedness" of the editors alluded to by Mr. Hinton, although an admirable quality, is apt to be abused, and surely is so in a notice of the late exhibition of the Photographic Section of the American Institute. Such exhibitions are intended to encourage and educate photographers, and the criticism of the exhibits should be helpful in that direction. But to say that it is incomprehensible how a "man dares to show in New York City such absurd monstrosities of pictorial clap-trap," and that to do so is "brazen insolence," with all that it implies against the judgment of the respected secretary of the section, is not criticism, but "billingsgate," more likely to hinder than to help.

Readers of *Camera Notes*, however, may safely be left to estimate such writing at its true value, and will agree with us in congratulating the editors on having got the number for January, 1899, ahead of any of its predecessors.

THE AMERICAN ANNUAL OF PHOTOGRAPHY AND PHOTOGRAPHIC TIMES ALMANAC, *New York: The Scovill & Adams Co.*—Year by year this excellent annual and almanac comes so very much alike that it is difficult to find anything new to say, or even to put our expressions of appreciation into new forms.

It includes the usual series of articles by 56, mostly well known, writers, and as they generally write on the subjects with which they are most familiar, or with which their names have been most intimately associated, the articles are brimful of instruction and information; the usual number of tables of reference, and, we were about to say, the usual number of illustrations. But that would have been only half a truth, as it is here that there is a real advance. Thanks to the few noble souls who have always seen in photography something more than the mere reproduction, American photographers are rapidly rising above the low level with which they have been so long content, and the evidence of that advance is clearly visible in the higher grade of the pictures in this volume.

Those whose library contains the previous twelve volumes of this excellent annual do not need our advice, but to those who have not made its acquaintance we would say, secure it at once and you will not only never regret it, but you will not, if you can possibly help it, willingly miss another.

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tioga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

MOBILE CAMERA CLUB.

This club met for the first time in its new quarters in the Art League Rooms on Dec. 17, and expressed great satisfaction with the dark room arranged by the secretary and a special committee appointed for that purpose.

The secretary reported the arrival of the set of lantern slides kindly lent by the New York Camera Club, and containing some of the work of the best slide makers in the country, including Stieglitz, Fraser, Post, etc.

Miss Jo Martin and Willie Croom were admitted to membership, and the evening was pleasantly spent in examining a number of prints, and a series of negatives, the result of experiments undertaken to ascertain the speed of various shutters.

THE ATLANTIC CAMERA CLUB.

The secretary of this club has adopted a novel method of reminding the members of his desire to form a collection of their work. We have before us one of the ordinary billets or notices of meetings in the shape of the popular bordered 5 x 4 mounts, in the center, or place reserved for the print, of which is printed the notice of the meeting, followed by the following request:

"Mount a nice picture on this mount; and then
Mount with it on the elevator to the A. A. C. Club room."

FOSTORIA CAMERA CLUB.

The third Salon of this club was held as usual on Thanksgiving day, and was, if possible, more successful than either of its predecessors. It was visited in the course of the afternoon by over 500 of those interested in pictorial representation by photography, and the general opinion was that a considerable advance had been made on the work of last year. The judges, as before, were Mr. M. B. Waldo, Miss Ida M. Ferris and Mrs. J. W. Davis; who considered 45 of the pictures, the work of 18 exhibitors, worthy of a place in the permanent collection.

In the course of the day a meeting was held in the residence of A. E. Mergenthaler, attended by representatives from most of the principal towns of the State, for the purpose of organizing a State association, the result of which was the formation of THE AMATEUR PHOTOGRAPHERS' ASSOCIATION OF OHIO; the adoption of a constitution and by-laws for its guidance, and the election of the following officers: President, C. M. White, of Newark; first vice-president, A. E. Mergenthaler, Fostoria; secretary, Emma Spencer, Newark, and treasurer, A. Emerine, Jr., Fostoria.

TORONTO CAMERA CLUB.

The eighth annual exhibition of this club was opened on Dec. 6, with more of an international character than any of its predecessors, and while the number of

exhibits appears to be about the same as that of last year, there is unmistakable evidence of progress in the work of the members.

The judges were Messrs. C. M. Manly and J. Kennedy, but it should not be understood that the following prize list necessarily includes all of the best exhibits, as many pictures were marked "not for competition." The prizes were awarded as follows:

Open classes.—Section A (prints)—Gold medal: No. 75, "Constance," by Miss Mathilde Weil, Philadelphia; silver medal: No. 104, "As Evening's Drooping Eyelids Gently Close," by Mr. F. W. Levett, of London, Eng.; bronze medal: No. 71, "The Magic Crystal," by Miss Weil. Awards of merit to Mr. W. H. Hart, Detroit; Mr. F. Slater, London, Eng., and Mr. Andrew Emerine, Jr., Fostoria, O.

Section B (enlargements)—Silver medal: No. 201, "A Calm Evening," by W. F. Slater, of London, Eng.; bronze medal: No. 208, "Main Entrance New City Buildings," by Mr. R. G. Davis, Toronto Camera Club.

Section C (lantern slides)—The silver medal was awarded to Mr. R. G. Davis, Toronto Camera Club, and the bronze medal to Mr. H. E. Farmer, England.

Members' classes.—Section D (prints).—Silver medal: No. 19, "Cuba Libre," by Mr. Ernest J. Rowley; bronze medal: No. 85, "Their Evening Meal," by Mr. W. J. Watson. Awards of merit to Mr. R. G. Davis (3), Mr. T. C. Blogg and Mr. Alex. Buntin.

Section E (hand camera work)—Silver medal: No. 228, "Champlain Market, Quebec," by Mr. A. R. Blackburn; bronze medal: No. 270, "The Home of the Deer," by Mr. F. G. Bowers. Award of merit to Mr. Blackburn.

Section C (lantern slides)—Will be judged in the club rooms on Monday evening next, when the Philadelphia and Brooklyn slides will also be shown.

The officers of the club for the present year are as follows: Dr. Edmund E. King, President; Mr. W. H. Moss, first vice-president; Mr. H. M. R. Glover, second vice-president; Mr. John J. Woolnough, secretary; committee: Messrs. Ernest M. Lake, J. G. Ramsay, W. McTaggart, W. Bohme, H. B. Lefroy and H. Hampshire.

MINNEAPOLIS CAMERA CLUB.

It is often difficult to find business sufficiently interesting to bring the members of photographic societies together, but practical demonstrations even of ordinary processes never fail to secure both numbers and attention. The business at the meeting of the above club on Wednesday, Dec. 14, may be taken as an example worth following. By invitation various members brought faulty negatives, and the more experienced demonstrated how, by various methods of both whole and partial reduction and intensification, they could, at least most of them, be made to give good prints.

THE CAMERA CLUB OF NEW YORK.

The regular monthly meeting of the club was held at the rooms, No. 3 West Twenty-ninth street, on the evening of Dec. 13, when Mr. William M. Murray read a paper on "Genre," and went into the subject exhaustively. Messrs. Voigtlander & Son exhibited several of their new lenses.

An exhibition of prints, showing "Birds and Animals in their Native Haunts," by Mr. William E. Carlin and Mr. Leverett W. Brownell, occurred between Dec. 14 and Dec. 31, 1898.

On December 22 Mr. Burr W. McIntosh lectured on "The Little I Saw of It," being the war in Cuba, illustrated by photographs made by the lecturer.

Dec. 27 Mr. Gilbert Ray Hawes gave a lecture, illustrated by lantern slides, on "Cities of the Baltic."

AMERICAN LANTERN SLIDE INTERCHANGE.

The Interchange during the month of December got into working order, and about 12 sets of slides have been put into circulation. The Akron Camera Club, of Akron, Ohio, has recently sent a set of slides, the quality of which was good enough to permit to be admitted as a member of the Interchange. It is the first Ohio club the Interchange has had since the Cincinnati Club retired.

The purpose of the Interchange is the systematic circulation of sets of slides among organized associations or clubs and not among individuals. Many applications for the use of sets by individuals have been made, but cannot be honored in view of this rule.

OUR REVISED PRIZE SET OF SLIDES.

Subscribers and clubs desiring the use of these slides should apply to Mr. F. C. Beach, 361 Broadway, New York. No fee except transportation one way.

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander & Davis), Washington, D. C., from whom copies of the patents may be had.]

J. L. ATWATER, Western Springs, Ill., assignor to the Vive Camera Co.,
Chicago, Ill.

Shutter.—No. 612,476.

By this invention a shutter is provided which is operated by levers to open and close it. No springs seem to be used, but the shutters are moved by the positive manipulation of levers.

H. M. REICHENBACH, Rochester, N. Y., assignor to Reichenbach & Morey Co.,
same place.

Folding Camera.—No. 613,310.

Consists of a folding box camera wherein the front is hinged and lets down and carries the lens board and means for automatically extending the bellows when the front is dropped down. It also carries means for adjusting the lens board to secure the proper focus.

M. H. SPRINGSTEEN, Frankfort, Mich.

View Finder.—No. 613,430.

To the back of the camera above the plate holder is secured an open frame equal in size to the plate and provided with two bars spaced apart slightly at the center of the frame. At the lens board and above it is mounted a vertically adjustable sight. By bringing the sight in line with the slit between the bars the desired view will be properly placed on the plate.

D. F. HULBERT, St. Louis, Mo.

Relief Photograph and Method of Producing Same.—Nos. 615,025 and 615,026.

These patents cover, first, as an article of manufacture an embossed picture on a pliable non-elastic malleable metallic mount (such as lead); and, second, the art of producing embossed pictures, which consists of attaching the photographic print of picture to a pliable, non-elastic malleable metallic mount, such as lead, and embossing the mount and print with a tool.

S. DWIGHT, Mitchell, S. D.

Multiplying Plate-Holder.—No. 615,064.

Comprises a plate holder or chamber and a plate carrier in the plate holder, a light opening in the plate holder and means for closing said opening, and a mechanism for adjusting the plate carrier in the holder for the plate to receive a series of impressions which extend longitudinally on said plate.

W. B. COZZENS, New York, N. Y.

Developing Apparatus.—No. 615,143.

It is formed of a flat box having transparent bottom and top, the top being removable and carrying a removable partition which divides the box into two compartments. The plate holder containing the exposed plate is placed in one compartment, the slides removed and the plate dropped by means of an ejecting rod. The partition is raised and the plate slid into the other compartment, partition is then replaced, and empty plate holder removed. Developer is then poured in; cover replaced and partition removed.

Answers to Correspondents.

[Communications for the editors, pictures for criticism, and apparatus and material for examination, should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*

HAWAII.—We do not reply to anonymous correspondents. You may use a *nom de plume*, but we must have your name and address. When you send them, please repeat the questions, and notice also that they should be sent not to the publishing office, but to Tioga Centre.

RICHARD G. PECK.—To fully answer all your questions would occupy more than the whole space available in one number. You will find all necessary information in any of the hand-books, especially in "The Right Road to Photography" about to be published by G. Gennert, of New York. No wonder that your prints change in the hypo when attempted to be toned in a solution of only one grain of gold to 50 ounces of water. Try one to eight instead. Then the possible tone of any print depends more on the negative than on any particular formula. A negative too thin to permit of deep printing—that is, the reduction of sufficient silver—cannot be toned beyond a warm brown without becoming a slaty blue. Washing only removes the soluble salts of silver, not the chloride; the hypo is employed for that purpose. Read carefully our article on the "Combined Bath" on page 492 of our November issue, and try how you succeed with it. If you *must* employ separate solutions and

want to fix before toning, fix in a one to eight solution of hypo, wash thoroughly and tone in one grain of gold in five ounces of water, neutralized by sodium bicarbonate. Have nothing to do with alum.

J. C. HOUSER.—You are mistaken. The process of Liesegang and Obernetter, so far from being a "fake," is one that is largely practiced, and that gives very beautiful results. You should know that there is more than one way of doing such work.

A. E. WHITSBRUCK.—Various methods of rendering photographs translucent and coloring them on the back have been introduced from time to time, but we cannot at the moment remember where a description of any of them is to be found. Probably the simplest is to give the photograph one or more coats of Canada balsam thinned by turpentine, and apply the colors after it dries. Instead of balsam and turpentine, paraffin may be scraped over the back of the print, the print placed between sheets of blotting paper and a hot iron applied to cause absorption. There is still another method, more generally adopted when the photograph is to be mounted in the concave side of glasses sold for the purpose. The print is fastened to the glass and when dry the paper is gently rubbed away with a moistened finger till only the film holding the image is left. The color is then applied and the whole backed either with another glass, or in any convenient way.

ELSIE CRAWFORD.—Yes, you will find the hand camera a delightful companion and a means of making fine pictures, but not now; not until you have had sufficient experience to know its capabilities and limitations, and that you can only acquire by the use, and that for a considerable time, of the stand camera.

ONE IN DOUBT.—There is no doubt about the matter. Your predecessor could not sell you what did not belong to him. The negative was his property, made by him to produce the portraits ordered by his client; but he could not print and sell copies from that negative without the permission of that client, and consequently could not give that right to you. The question of your right to exhibit prints in the show case is slightly different, but you will study your own interest better by applying for permission to do so.

A. L. SOMERVILLE.—Any of the ordinary printing out papers may be used in the expodak. Ours is at present filled with Gilbert's Reliable, simply because it was, at the time, the only paper of the kind at hand, and it answers admirably.

C. F. BAUGHMAN.—We are not likely to see the prints to which you refer, and if you wish criticism send one print direct. Good prints cannot be got from negatives that are too thin or weak, but such print better under pale green—not blue—glass. Better results are, however, got by intensification.

C. L. SMITH.—We could tell better by seeing the negatives, but judging from the prints, they—the negatives—are very much under-developed. Snow, instead of appearing as a light, is not much darker than middle-tint.

J. E. TATNALL.—See answer to A. L. Somerville.

D. H. BOWER.—Formulae are merely indicative, never imperative. The following will do as well as any other:

Metol.....	30 grains
Sodium sulphite.....	100 "
" carbonate.....	100 "
Potassium bromide.....	10 "
Water	10 ounces

"Index Rerum Photographic," by Dr. John H. Janeway, U.S.A., continued from page 526, Vol. X.

Y

YELLOW COLORATION OR FOG OF NEGATIVES AND THE REMEDY.—M. Blagney states that the yellow fog so often seen on negatives is most often produced by the action of the clearing bath on the gelatine film impregnated with alkaline salts; and the question arising if the coloration would still be the same if the coating of bromide of silver, instead of being alkaline, were acid, a developed plate was plunged into a bath composed of water, 1 liter; citric acid, 25 grammes. After remaining two minutes, it was quickly washed with water to remove the citric acid, and it was then cleared. The negative thus treated presented a very beautiful white and black tone resembling the "wet" negative. The action of the citric acid bath seems to have the effect to clear the whites; they become, as it were, indecomposable, and in the presence of the hyposulphite of soda they no longer color. This operation previous to clearing has, moreover, the advantage of giving to the negative a great deal of clearness, and to preserve the hyposulphite in which the sulphuret of silver ceases to deposit, so that the bath remains always white, etc. It results from these experiments that the negatives treated with citric acid may be cleared in full white light, or in other light besides that of the dark room. There is therefore no further need of using any precaution for clearing after the bath of citric acid.

YELLOW NEGATIVES.—After the lapse of time, negatives, and especially valuable ones, are often, upon examination, found to be affected with the "yellows" in a more or less decided way. The procedure of Mr. Blagney in the previous article would seem to be the remedy for this; but if not adopted, the following can be tried with success: After development wash the plate for ten seconds under the tap, and immerse for five minutes in a saturated solution of alum, which should be discarded when badly discolored. This not only toughens the film, preventing frilling, but also frees it from the stain caused by the pyro in the developer. After a thorough rinsing under the tap (a tuft of cotton aids in removing any alum that may adhere to the film), the plate is placed in a fresh and cold hypo bath—water, 4 parts; hyposulphite of soda, 1 part. When the bromide of silver appears entirely dissolved, judging by examination, let the plate remain in the bath two or three minutes longer. It is now washed for about five minutes, and then placed for the same length of time in a fresh and separate solution of alum. This second alum bath acts as a scavenger, eliminating more effectively than any other agent lingering traces of the hypo. The plate is then again washed for about fifteen minutes under the tap, and after removing any possible sediment or adhering particles

with a swab of cotton, the plate, now clear and sparkling, is set aside to dry.

YELLOW PRINTS.—Cause, imperfect washing almost always; sometimes too strong toning bath, and clearing too many at the same time in the same hypo bath without moving them. See Prints.

YELLOW PELLICLE FOR ORTHOCHROMATIC PLATES.—Vogel recommends the following formula: Collodionize a thin plate with normal collodion, 1¼ p. c.; 100 parts aurantia, 0.4 p. c. This formula gives the darkest medium that may be required. Gelatine pellicles dyed yellow, and rigid enough to be placed in the objective, may be prepared as follows: Solution A: Gelatine, 75; glycerine, 10; water, 950 parts; solution of aurantia, 0.5 p. c., 50 c. c. B: Gelatine, 75; glycerine, 10; water, 1,000 parts. These, thoroughly filtered, are used in the proportions given further on to coat plates. Glass plates (ordinary glass will not answer, as it is not sufficiently plane), after remaining twelve hours in nitric acid, are carefully washed in running water, and then wiped with a clean rag; then vigorously rubbed with a tuft of wool imbibed with yellow wax, 5, benzine, 100 parts, so as to coat them uniformly, heated over a Bunsen burner and polished with a tuft of wool, heating two or three times. Then the plates are carefully polished with a wad of clean wool until no trace of wax is seen. To avoid detachment of the film before complete desiccation, pass around the plate, on a width of five or six millimeters, a cotton wad moistened with benzine or ether. The glass thus uncovered is coated with a little albumen applied with the aid of a brush. The plates are now ready to receive the colored gelatine. To coat a plate 13 x 16, take for pellicle No. 1, solution A, 5 grams; solution B, 35 grams. Mix well and filter through hygroscopic cotton, and pour the liquid in the center of the plate, previously leveled, and spread with the aid of a piece of cardboard. After desiccation detach the pellicle. Pellicle No. 2, solution A, 10 grams; solution B, 30 grams. Pellicle No. 3, solution A, 20 grams; solution B, 20 grams. Pellicle No. 4, solution A, 40 grams; solution B, 10 grams. Same operations as for pellicle No. 1. When placed in the objective (No. 1), an orthochromatic plate requires the same time of exposure as an ordinary plate of equal sensitiveness exposed without the interposition of the yellow pellicle. No. 4 is intended to obtain perfect orthochromatism; by its use the blues and the violets are sufficiently restrained, and the colors but slightly refrangible take their value; the time of exposure then becomes four times longer. These pellicles in no manner darken the colors green, yellow, orange and red, whilst this is not the case with the blue and violet. The action of the yellow pellicle

is to assist, by a physical influence, the chemical sensitiveness of the plate.

YELLOW STAINS ON NEGATIVES.—Gelatine, the basis of modern dry plate photography, is one of those animal products that very readily unites with coloring matters. The union of the color with the gelatine is made still more permanent from the fact that the gelatine is rendered insoluble by the action of light in conjunction with the silver salts that form the negative image. This latter result is also intensified when chrome alum is used in the manufacture of the dry plate, in order to prevent frilling. Therefore we have a very difficult problem to solve when we attempt to remove stains from gelatine negatives, since these discolorations are due to a union of the coloring matter with insoluble gelatine, and a removal of them completely is about equal to the destruction of the gelatine itself. Of course, in this, and as well in many other cases, prevention is better than cure. In studying the character of these stains, it is well to arrange them according to their origin. 1st. We have stains due to the action of various materials upon the plate before it goes into the developer—finger marks, etc., due to careless handling of the plates before they are placed in the holder. There is no way to remove them, as they are caused by the excessive reduction of silver salts when the perspiration of the skin has adhered, and which always produces a reduction of metallic silver. 2d. Stains that come during development, and these are more difficult to either prevent or remedy. With pyro and hydroquinone there is a very disagreeable yellow or brownish stain, due to the use of excessive alkali or prolonged development. These negatives never give satisfactory positives. With hydroquinone it appears next to impossible to entirely get rid of this coloration. A very great improvement is obtained by soaking in a bath of sulphite of soda crystals, 2 ozs., water, 10 ozs., sulphuric acid, $\frac{1}{2}$ oz., for some hours before placing it in the hypo bath. With pyro the stained negative can be completely cleaned by using an acid alum bath—alum crystals, 1 oz., water, 10 ozs., hydrochloric acid, 1 dram. The plate must be well washed before being placed in this bath, and also before being placed in the hypo bath. It is said that hydroquinone stains may sometimes be removed by placing the negative, after the hypo bath and a thorough washing, in a solution of hydrogen peroxide—the commercial product—containing enough ammonia to make it just alkaline to red litmus paper. They may stay in this bath several days to obliterate the deeper stains. Another bath quite serviceable is to mix 6 vols. of hydrochloric acid with 1 vol. of nitric acid, and allow it to stand several days in a warm place, 77° F. When required for use dilute with 12 vols. of water, and immerse the negative in it until the desired cleaning effect is obtained. 3d. From imperfect clearing. These grow stronger with age.

The best plan to guard against these is to employ two clearing baths, and then thoroughly washing. 4th. Impure water. Careful manipulations, strict following of the directions given for development and clearing of the plate, and cleanliness in all things, will give negatives free from stains.

Z

ZAPON VARNISH.—A new varnish from Japan, which has, it is stated, the following remarkable properties: It is considerably harder than any kind of varnish, and gives a coating which, regarding hardness, equals more a transparent enamel than a varnish. When drying, it becomes smooth; the coating becomes so even and hard that it is not visible to the eye, and cannot be detected by touching. It does not become smeary or sticky, and if the material coated with it is handled, it shows no chalk-like marks, like varnish. Fly marks have no influence upon it; dirt can easily be removed with soap and water without injury. A completely faultless coating is guaranteed in all cases. The article to be coated, without regard to size or shape, is immersed in zapon.

ZINC. $\text{Zn} = 64.9$.—A somewhat abundant metal found in the state of carbonates, silicate and sulphide, associated with lead ores. The native carbonate or calamine is the most valuable of the zinc ores, and is preferred for the extraction of the metal. It is a bluish metal, which slowly tarnishes in the air; a lamellar, crystalline structure, in density varying from 6.8 to 7.8, and under ordinary circumstances brittle. Between 120° and 160° C. (248° – 302° F.) it is, on the contrary, malleable, and may be rolled or hammered without danger of fracture; and what is very remarkable, after such treatment it retains its malleability when cold. The sheet zinc of commerce is thus made. Dilute acids dissolve zinc very readily; it is constantly employed in this manner for preparing hydrogen gas.

ZINC BROMIDE. $\text{Zn Br}_2 = 225$.—Prepared by passing bromine vapor over red-hot zinc. It is a white, crystalline salt, which greedily absorbs moisture, and so deliquesces when exposed to the air.

ZINC CHLORIDE. $\text{Zn Cl} = 136$.—Prepared by dissolving zinc in hydrochloric acid. It is a white, soft, very deliquescent substance, very soluble in water and alcohol. From its great affinity for water it is sometimes employed for removing the elements of that liquid from organic compounds.

ZINC IODIDE. $\text{Zn I}_2 = 319$.—When zinc filings are heated with iodine, they combine to form iodide of zinc—a colorless, deliquescent, unstable sub-

(To be continued.)



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Wanted—A good single lens of from 14 to 18 inch focal length. Must be cheap for cash. R. Payne, Lock Box No. 851, Marietta, Ohio.

For Exchange—A 4x5 Eastman Kodack in good condition, also Diamond Ring, to exchange for a better camera. Albert Cesal, 760 W. 18th St., Chicago, Ill.

Wanted—A good Camera and Lens. 4x5. Write description and price. C. C. Hollenbaen, 20 E. Broad St., Columbus, O.

Wanted—20 inch Double Symmetrical Lens, good quality, also 8x10 or 11x14 box. Give description and lowest spot cash price. E. A. Wheatley, Temple Court, New York.

Wanted—A 6½x8½ long focus reversible back camera. State lowest cash price. Alex. Dundas, Box 71, Andover, Mass.

For Sale—A No. 2 folding Hawkeye, 5x7, without lens or shutter, with six double plate holders, in good condition. Cost \$35.00, including holders. Will sell for \$12.00, c. o. d. Privilege of examination. Geo. H. B. Turner, Ayer, Mass.

For Sale—A 6½x8½ folding Hawkeye camera and three plate holders. Cost \$45; will sell for \$20. Is in good condition. Albert Burnton, 49 Sixth Avenue, New York.

For Sale or Exchange—A 5x7 Henry Clay camera, roll and plate holders. List \$55. Like new. A Dallmeyer triple achromatic lens 10.5; covers 8x10 plate in 1-40 second, used on above. A. R. C. Manufacturing Co. 4x5 R.R. lens, 3 holders. Shaws use. A No. 1 Kodak, like new. Sell or trade all or separate. Pay cash difference if any. Want 4x5 long focus hand camera, new clothing, shot gun, ladies' wheel, books, medical or other. C. O. D. Privilege of examination. Dr. M. H. Farmer, 2899 Archer Avenue, Chicago.

Wanted—Three Double Daisy 3¼x4¼ Plate Holders, S. & A. Co. of N. Y. manufacture. F. M. Laraway, 100 Bank of Commerce Bldg., Minneapolis, Minn.

For Exchange—Medical electric battery with four electrodes, almost new; for a small hand camera. J. Edward Weit, 882 Logan avenue, Cleveland, O.

Exchange—Prints of inland and farm subjects for mountain or seashore subjects. E. M. Miller, 3621 Grand avenue, Des Moines, Ia.

For Sale—One 4x5 Rochester Optical Co. Premier camera, fitted with Rapid Rectilinear Lens, three plate holders, all in first class condition; outfit cost \$24; will sell for \$14. This lens is particularly good; the outfit can be had on trial for one week on deposit of above amount with the A. A. P. Address T. C. Francis, care AMERICAN AMATEUR PHOTOGRAPHER.

For Exchange—Several useful articles, including a fine navy telescope and gold watch, for a complete 6½x8½ long focus outfit, with good lens and of recent date. A. B. Roane, 822 Fourth street, Portsmouth, Va.

For Sale—A new Ross rapid symmetrical 9x7 lens, for 6½x8½ plate, fitted with Prosch triplex shutter and box, for \$36. Cost \$63; is new and in splendid condition. Swan, 23 W. 17th street, New York.

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THE THORN IN THE FLESH,
BY F. P. STREEPER.
RE. 11-1890



No. 220.

By F. P. Streeper.

"THE THORN IN THE FLESH."

THE
AMERICAN AMATEUR PHOTOGRAPHER.

Vol. XI.

FEBRUARY, 1899.

No. 2.

A Discriminating Reducing Agent.



No. 90.

By H. A. Clark.

"PORTRAIT OF AN ARTIST."

As a means of control, reduction may be said to have come into use with the advent of gelatino-bromide, and has been employed, especially by those who knew just what they wanted, both locally and over the whole images, with much benefit.

The action of the various reducing agents hitherto in use, of which the well known Farmer's solution may be taken as a type, is equal all over the plate; that is, it removes what delicate detail there may be in the shadows and the half and middle tones to the same extent as it does the high lights, and therefore, in all over reduction at least, always materially and sometimes fatally altering the values, the most essential quality of pictorial photography.

While for some purposes uniform reduction is necessary and will continue to be employed, the new reducing agent possessing what may be called discriminating properties, and for which we are indebted to the Messrs. Lumiere, will give a power long wished for but hardly expected.

It is ammonium persulphate; not the acid or hydrogen sulphate, with the formula $\text{NH}_4 \text{HSO}_4$, sometimes called the bisulphate and persulphate, but what may be called the true persulphate, with the formula $\text{NH}_4 \text{SO}_4$, and said to be produced by electrolysis from the



No. 281.

By W. E. Smith.

"AT THE PLOW."

hydrogen sulphate, the atom of hydrogen being eliminated at the negative electrode, thus, $\text{NH}_4 \text{HSO}_4 = \text{NH}_4 \text{SO}_4 + \text{H}$, or ammonium persulphate and free hydrogen.

It is employed in solution varying in strength from 2 to 5 per cent., say, from ten to twenty-five grains per ounce, and its peculiarity is that it attacks the denser rather than the weaker deposits; that is, that the hard high lights may be reduced or lowered in tone while the delicate detail in the shadows will remain untouched. For most purposes a solution of twenty grains per ounce will be found suitable for both general and local reduction; and with, say, Farmer's solution to reduce equally all over when required, and ammonium persulphate to reduce only the higher lights, there can in future be no excuse for white paper skies and water, or for prints of the "soot and whitewash" variety.

Just when to stop development has always been more or less of a difficulty, even to the expert, especially when something like true values was the aim, and as the securing of that essential, but sadly

neglected, feature is dependent on development as well as exposure, we think we see in ammonium persulphate a means of overcoming it.

As will be seen on another page, Mr. Stieglitz secures the exquisite tonality of his lantern slides by first carrying development far beyond the ordinary extent, and then by both partial and general reduction bringing them back to just what he wants, and we propose to treat the ordinary negative in the same way. By carrying development to complete opacity and then reducing alternatively in Farmer's solution and ammonium persulphate, there should be little difficulty in producing negatives of any desired quality or to give any desired effect.

We do not know whether the new reducing agent has as yet reached our shores, but our enterprising stock dealers will not leave us long without it.



No. 280.

By Frank R. Miller.

"DESPAIR."

A Word About Lenses.

BY W. E. PARTRIDGE.

WHILE the short focus lens produces very bad perspectives, it ought not to be taken for granted that the lens of long focus is in all cases perfectly satisfactory as a picture maker. Years ago Dallmeyer laid down the rule that the most pleasing picture is produced when the focus of the lens is equal to the diagonal of the plate. Less than this always produces a more or less unsatisfactory result. Thus the 5 inch lens is not quite a success on a 4 by 5 plate. This is getting to be pretty well understood, and the readers of THE AMERICAN AMATEUR PHOTOGRAPHER have had many convincing lessons from the editor in this line.

There is another side of the question which is not often considered. Perhaps the most correct statement would be that most amateurs think there is no other side. For almost every kind of landscape and figure work there is such a thing as getting a lens of too long focus. The evil results of a very long focus lens are not as easily seen as those arising from a short focus, but they exist. The very best pictorial results are obtained when the focus is sensibly the same as the diagonal of the plate. When this is exceeded there is, in landscape work, a crowded, hemmed in effect. An example of this is easily obtained by using a $6\frac{1}{2}$ by $8\frac{1}{2}$ lens on a 5 by 8 or 5 by 7 plate. On comparing the two pictures the want of space on the smaller plate will often be very strongly manifest. This is more easily seen, perhaps, when using a lens of 10 inch focus on a 4 by 5 plate.

The rule does not apply of course when it is desired to take a bit out of a distant landscape. In nearly all telephoto lens pictures the sense of cutting off something is plainly felt. The reason for this rule is not easily explained. It is an unwritten and unknown law among artists. But they follow it with little deviation when drawing, sketching or making pictures of any kind. The universal adhesion to it is undoubtedly founded on some intuitive perception of what is best and most pleasing.

To the editor's constant adjuration not to use a short focus lens may be added another. Do not go to the other extreme and get a lens much exceeding in focus the diagonal of the plate to be used. Thus for a 4 by 5 the $6\frac{1}{2}$ to 7 inch lens gives the most pleasing landscapes, etc. A 5 by 8 calls for a $9\frac{1}{4}$ or $9\frac{1}{2}$ inch focus. The 8 by 10 plate should have a lens of from $12\frac{1}{2}$ to 13 inches in focus, and so on.



306. "A LONELY FORD,"
BY
CATHERINE SOPER.

There are commercial reasons why many lens makers object to these long focus lenses. The purchaser usually likes to boast that his lens without a stop "cuts the corners" of a certain size of plate. He does not usually consider whether it will give the most pleasing and satisfactory picture on the size of plate he contemplates using. The maker by giving him the short focus or wide angle furnishes the most for the money, and so satisfies all parties. This is especially good for the maker, because the short focus wide angle or medium angle is much easier to make than some of the other types.

In conclusion by all means follow the editor's advice and do not get a lens short in focus. Even a telephoto is better than such a thing, in spite of its narrow angle.



By Emma J. Farnsworth.

"A VESTAL VIRGIN."



No. 287.

By W. E. Smith.

"ON THE PAUTIXET."

The Hand Camera.

BY GEORGE L. TAYLOR.

THE hand camera may be said to be at once the good and the evil genius of photography. The modern high-class instrument with its magazine, roll holder, or numerous plate holders, its lens working at a large aperture and giving any desired degree of definition equally all over the plate or film, its properly adjusted finder and simple but accurate arrangement for focusing for all distances, is, in the hands of an experienced photographer, an invaluable addition to his apparatus and gives him a power undreamt of previous to its introduction.

By an experienced photographer I don't mean merely one who has wrought even much and well with the stand camera; who only knows photography mechanically, as it were; but one who is acquainted with all its whys and wherefores, and who has by practice with the hand camera acquired a thorough knowledge of all its possibilities and limitations.

There are already a few such, and their number is increasing and will increase, as to such, and under certain conditions the camera in the hand is a much more valuable tool than the camera on the stand; and it is a well known fact that the most popular pictures by some of the leaders in artistic photography are enlargements from hand camera negatives.

It is not of those, however, that I mean to write, but of a much larger class, who, altogether ignorant of photography, get smitten with the hand camera craze with about as much chance of success as the Irishman who on being asked if he could play the fiddle replied that he did not know, as he had never tried.

Whether led by the example of the thousands who are equally foolish, misled by the assertions and claims of manufacturers and dealers, or tempted by the comparatively low figure at which a praised to the skies hand camera may be obtained, and that in some cases is less than half the price of a suitable lens for it, the mistake is equally great and in most cases equally fatal. It is attempting to do without knowledge and by means through which knowledge cannot be acquired something that without knowledge cannot be done, and the result is dire disappointment. He either abandons *photography* (?) in disgust or becomes so vitiated in taste and appreciative ability as to admire and show with satisfaction photographs that from under-exposure and other causes are a travesty on the name.

Of such photographs are probably 90 per cent. of all the snap shots that are made, and those who make them, and even proudly carry their cameras wherever they go, are no more entitled to be called photographers than is he who knows not the multiplication table to be called a mathematician.

The practice of amateur photography is the most desirable of all changes of occupation, and as a means of recreation, combined with cultivating and educational qualities, it has no equal; but he or she who would enjoy it to the full and make the best use of its opportunities must, *in the beginning*, eschew the hand camera as they would the road to perdition, and have nothing to do with snap-shooting until they not only know a good negative when they see it, and how to produce it under all circumstances, but also know all that a photographer need to know of the relation of light to subjects and sensitive films, the nature and properties of the material which they employ, and are acquainted with all the possible modifications of the methods they adopt.

That necessary knowledge can only be acquired by the patient,



No. 288.

"SEEKING SOLACE."
BY
C. S. MOORE.

persevering employment of the stand camera, with its accompaniment of equally patient, persevering practice in the dark room; but to those who acquire it photography is a pleasure far beyond the comprehension of those who never get beyond the button pressing stage.

Lantern Slide Compensating Cover Glasses.

BY ALFRED STIEGLITZ.

IN Mr. Murray's very able article on "Picturesque Tonality in Photographic Work, and How It May Be Obtained in Transparencies and Slides," which appears in *Camera Notes*, Vol. II., No. 1, my method of slide making was fully discussed.



FIG. 1.

Lantern slide by the Stieglitz method, with as many values as possible.

For the benefit of those who have not been able to fully grasp the idea of the "compensation cover glass" method alluded to in Part III. of said article, it has been suggested that an illustration in our pages would prove of considerable value. Fig. 1 is a reproduction of one of the writer's night slides, which was made from a rather hard neg-



"TRUDGING HOME."
BY
ANDREW EMERINE, JR

ative. Notwithstanding that the slide was kept as soft as possible, it will be noticed how harsh and crude the reflections look, especially in the lightest range of tone values. In order to rectify this shortcoming and bring the tones into harmony, a sensitive lantern slide plate was brought into contact with the finished *matted* slide (Fig. I.) in the *exact* position which it would ultimately occupy as cover glass. (It is essential to make this cover glass from the matted slide in order to insure necessary register, as otherwise a white line would appear on the screen around the outlines of trees, steeples, etc.)

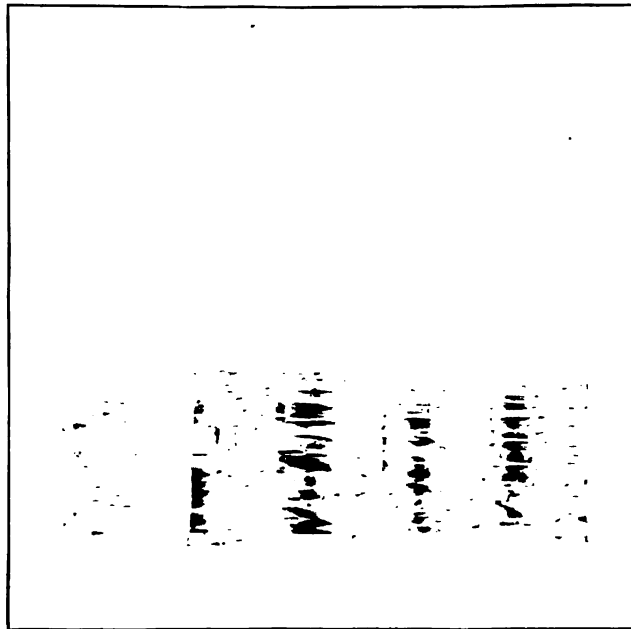


FIG. II.

Compensating cover glass with values exaggerated, made from Fig. I.

The plate, after having been exposed to an incandescent light, at one foot distance, for about a second, was developed, and then such portions as were of no use for the desired compensation were eliminated by the well known applications of ferrocyanide of potassium and hyposulphite of sodium. Fig. II. is the result of this manipulation, and in it we see the cover glass, reproduced from the film slide. It naturally is reversed, so that when the films of the slide and cover glass are brought into contact the slide will be in proper position for binding.

As a combination of Fig. I. and II. we get Fig. III., a slide with reflections in perfect harmony and in perfect register.

From mere description and illustration these various new methods of producing slides of a very high class may seem somewhat difficult and tedious. With very little practice, however, the slide maker will be surprised at the rapidity and ease with which he is enabled to obtain superior results, so that the little extra time and work spent on each slide thus treated will be more than offset by the satisfaction of having produced something out of the ordinary. The registering

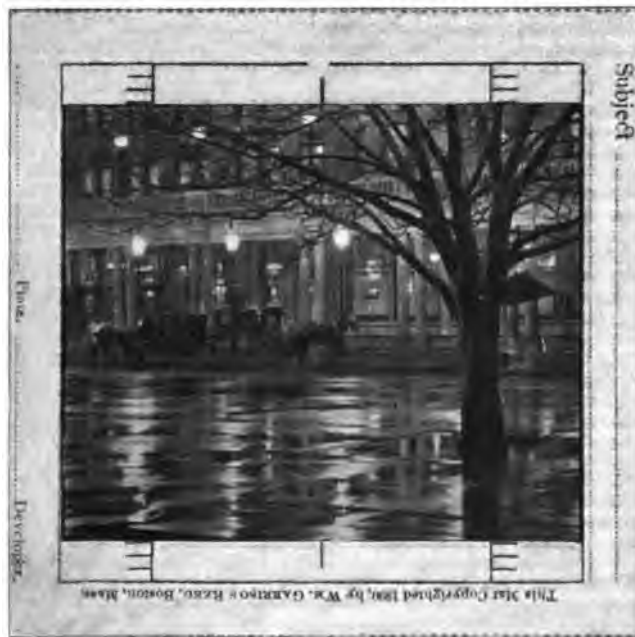


FIG. III.

Figs. I. and II. combined.

of the cover glass is exceedingly simple, an average worker being able to mount upward of twenty slides per hour. Unfortunately the reproductions give but little idea of the vast difference between the ordinarily mounted slide and the one with a compensation cover glass, as viewed on the screen; nevertheless, they serve their purpose in illustrating the method alluded to.

It will readily be seen what an immense field my method of producing slides opens, not only to the slide maker, but also to those who wish to improve their original negatives by making new ones from transparencies made by a combination of the methods suggested by the writer in Parts II. and III. of Mr. Murray's article.—*Camera Notes.*



By Lee Morehouse.

"RED ELK."

The Pittsburg Salon.

BEFORE this reaches the eyes of our readers the Pittsburg Salon and Exhibition will have been opened to the public, and we have no hesitation in saying that the Salon will be found a decided advance on that of last year, and indeed at least equal to anything of the kind that has been held in this country.

Although the exhibits from abroad are considerably in advance of those of last year, they are not so numerous as we expected, mainly we believe in consequence of the rather cynical notices of last year's Salon that appeared in several of our English contemporaries, in which by mixing up things that were altogether different they conveyed an altogether false impression.

The object of the Pittsburg Amateur Photographers' Society in this connection is threefold, (a) to promote the advance of photography among the members by offering diplomas and prizes for various classes of work, (b) the encouragement of photographers generally who have not yet reached the higher plane, and to lead them

through and up from what may be called the reproductive phase of the art. This they hope to accomplish by the general exhibition open to all comers, and to the ten best of whose productions diplomas are awarded; technique or photography pure and simple being taken into account by the judges; and (c) the promotion of the higher or true art phase of photography. Following the example of the "Linked Ring" in London and certain other associations, they aim at doing this by a Salon or exhibition, in a gallery apart from the others, of such pictures sent for general exhibition or as are specially sent for that purpose, as, in the opinion of the judges, give distinct evidence of individual artistic feeling and execution, or in the words of the prospectus, only such as possess artistic merit, display artistic aim, or show other features revealing true works of art.

We had the honor of acting as a judge, along with Mr. John W. Beatty, director of the Carnegie Art Galleries and Mr. John Caldwell, chairman of the art committee, and it is no breach of confidence to say that the Salon standard was placed as high, if not a little higher, than most of its predecessors, and yet among the 2,000 exhibits



No. 287.



By John F. Smith.

"THE OLD OAKEN BUCKET."

passed through our hands 340 were found worthy of a place in the Salon.

If it be true that to whom much is given of them much will be required, the Pittsburg Amateur Photographers' Society has a pretty heavy debt on its shoulders, but if the getting up of this Salon may be taken as an example of its efforts, it is meeting its obligations nobly. It is fortunate in having free of cost what may be called the run of the Carnegie Art Galleries. In that magnificent building it has its luxuriously fitted up committee room, large and properly furnished room for ordinary meetings, a fine lecture room, and a thoroughly equipped dark room; and for exhibition purposes a suit of three spacious and finely lighted—both for day and night—galleries superior to anything we have yet seen, with 510 feet of wall space in line. Fortunate also in having among its members many enthusiasts, and in its committee an amount of energy able to carry through anything, and fortunate in its local habitation, as Pittsburg, from its wealth and the appreciation of art fostered by the resources of the Carnegie Art Galleries and other institutions, will soon become one of the great art centers and picture buying cities in the country.

We have little faith in the amateur photographer who makes pictures to sell, but at the same time rejoice to see that the sales at recent exhibitions are increasing both in number and value, as however great the pleasure of making the picture may be, it is largely increased by the proof of its appreciation which the sale brings.

We shall have something both to say and to show of the Salon pictures in our next.



No. 258.

By G. Covert.

"OVER THE HILL."

Words from the Watch Tower.

BY WATCHMAN.

OF "History as she is wrote" we have an amusing example in a recent number of the *Professional Photographer*, where a lady tells us, and that too as the result of an historical research, that daguerreotypes were impracticable because of their extreme fragility, and to handle them meant destruction till *Daguerre* discovered that chloride of gold gave them durability. Not less beside the mark is the statement that Talbot "conceived the brilliant idea of *substituting* paper for the more expensive silver plates." It has always been true that historians, like doctors, differ, but hardly on such well known facts as the "gilding" of daguerreotypes and that Talbot's paper *preceded* Daguerre's silvered plates.

* * *

Photographers, as well as doctors and historians, seem to differ, but rarely, I should think, so widely as do the members of a firm who write in the same journal on "Pyro Developer" from thousands of others probably equally well qualified to form an opinion. They say: "We have tested during the last five years all kinds of developers. We have tested every new developer that has been put on the market. We have produced negatives with all of them that were beautiful to look at, *but the majority of them we found useless when we came to get our prints out.*" I know that pyro is still preferred by many good men, but would not have believed that a pair of experienced photographers could make nothing but useless negatives with any of the modern developing agents.



Notes.

MOUNTING LANTERN SLIDES.—The little tool described by M. Stainier in *L'Objectif* will be found helpful in the rather difficult operation of binding, or at least neatly binding, lantern slides. It consists merely of a strip of hard wood (about three-quarters of an inch thick), measuring, say, 5 in. by 2 in. Lengthways along the edge a slot, about $\frac{1}{2}$ in. deep and of width suitable to the average thickness of one's slides, is cut. M. Stainier says $\frac{1}{8}$ in., but we fear this would be too narrow for a good many American slides. Those not

having convenient means of cutting a slot may glue a piece of wood between two others, with equally satisfactory result. A piece of thin black velvet is coated (on its back) with thin, hot glue, and rubbed firmly into the slot, the overlapping edges being turned over and glued down to the edge of the wood. M. Stainier puts on his binding strips in four single pieces, and uses the above little device for firmly rubbing down first the edge and then the sides (by pressing the "rubber" towards the right and left) of the binding-strip to the glass. To those who put on their binding-strips in separate lengths this little tool will, no doubt, be useful, for fingers are apt to get sticky and to ruck up the strip instead of smoothing it down.

PROFESSOR H. W. VOGEL.—We regret to hear of the death of Professor H. W. Vogel, at the too early age of sixty-four years. He died in Berlin, where he was a teacher in the Technical High School, and an earnest experimentalist in various branches of science and especially in all that relates to photography. He had gained for himself a world-wide reputation and will be sadly missed.

SNAP SHOTS ON THE SCREEN.—Can anyone who happens to be included in a snap shot taken in a street or highway prevent the public exhibition of a lantern slide made from the negative? This is a question of considerable interest, and likely to be settled so far as Scotland is concerned by an action in the Glasgow law courts. It would appear that some time during the summer a member of the Shettleton Camera Club was photographing in the district, and among other interesting subjects made an exposure on a picturesque and very old way-side inn. It so happened that there was passing at the time a well known individual who would seem to have an objection to be photographed. A slide from the negative then made was subsequently exhibited at a meeting of the club, the photographer never dreaming of asking the permission of the included individual, and the result is an action for interdict. We wonder how our judges would feel on such a question.

SELF-TONING PAPER.—We are requested by Mr. Hermann Bauer, of Montclair, N. J., to state that the S. T. P. Mfg. Co. is in no way connected with the photographic paper trust, and that the self toning paper is going to stay notwithstanding the combine; that the company is fully equipped to fill all orders and will not raise the price of either the glossy or matt surface paper.

We understand that the matt, yielding fine black and white effects, is being largely employed by professional photographers, and from

the numbers of prints on all the varieties of self-toning paper that come to "Our Portfolio" we know that it is a general favorite among amateurs. Nor need it be surprising that it is so, and should continue to be more and more so, considering the simplicity and certainty with which such beautiful results are obtained.

AN INDEX OF STANDARD PHOTOGRAPHS.—Some time ago we called attention to this gigantic work, undertaken by Mr. H. Snowden Ward of the *Photogram*, which aims at listing the work of photographers all over the world that through individuality or by specialty of subject may at any time be in request either by business men or private collectors.

The index will be divided into sections dealing with professional illustrators, the principal photographic publishers, celebrities, genre pictures, landscapes, etc. Some of the sections will be further subdivided, and cross references and an alphabetical index will render search easy.

Special attention will be devoted to the less known but accessible photographs in national collections or in the hands of scientific bodies or private individuals; and information facilitating the obtaining of lantern slides and process blocks will be included. The book will include chapters dealing with the important question of copyright, both in this country and abroad, and with other matters of interest.

The great advantage of such a work is obvious, and we ask our readers to co-operate with the publishers in insuring its complete success, by forwarding to the American representative particulars of any series of photographs of general interest which they may possess.

The American section is in the hands of W. E. Ward, 160 Broadway, New York, to whom all information should be addressed, and who will be pleased to furnish any further information on request.

WHAT THE CAMERA TOLD.—The evidence of the result of a snap shot was recently of considerable service to Mrs. Osborn, a farmer at Washingtonville, N. J.

One of her farm hands, although apparently engaged at two dollars per week with board, sued her in Justice Smalley's court in Plainfield for \$193 for the work of the summer. As giving some idea of the quantity of work he got through, the mistress stated that he had only husked thirty bushels of corn in thirty days; and by way of corroborative evidence a snap shot print was exhibited in which he appeared in the middle of the field seated in a big armchair husking. The picture was taken by a friend of Mrs. Osborn, who had visited

her one day last fall during corn husking time. She was "snapping" the camera at various scenes about the farm and she caught Hastings seated in the big armchair husking corn.

When the amateur photographer heard of the dispute between Mrs. Osborn and her farm hand she turned the picture over to Mrs. Osborn to be used as evidence.

Taking this as an example of how the work was done, the jury had no difficulty in finding that \$11 would pay him sufficiently.

LITTLE FOLKS.—This interesting magazine for young readers offers a series of cash prizes for photographs of children, open to all comers, who may send any number of photographs of any size, and by any printing method except "blue," which is specially barred.

The photographs may be of children singly or in groups in action, children with pets, with toys; at play or amid unusual surroundings; and while technical qualities will be considered, the awards will be based chiefly on the *interestingness* of the photographs as pictures.

The prizes are five in number, of \$5 each, and for (1) the most beautiful picture of child-life, (2) the oddest picture of child-life, (3) the best picture of children in action, (4) the best picture of children with pets, and (5) the funniest picture of child-life.

The prize photographs are to be the property of *Little Folks*, and such as may be of sufficient value for reproduction, although not prize-winners, will be paid for.

Photographs for competition must be sent, not later than February 25, to the publisher of *Little Folks*, S. E. Cassino, 221 Columbus avenue, Boston, Mass.

A NEW PHOTO EXCHANGE.—As will be seen from the following letter, which is being sent out and a copy of which has been sent us, a Photo Exchange, very much on the lines of that so successfully floated and carried on by Mr. Archibald, of Rock Creek, and noticed in our January number, is being promoted, with headquarters in Portland, Maine. Just why Mr. Collins should seek to establish a new exchange instead of joining and giving a helping hand to one already successfully established we do not know, but there is always room at the top.

DEAR FRIEND: The object of this Exchange is to bring together from all parts of the United States amateur photographers, giving them an opportunity to exchange ideas and prints, to correspond regarding methods, formulas, material and apparatus.

Each member joining implies his willingness to enter into correspondence with any of his fellow members.

A monthly list of members will be sent to all members.

The only expense connected with membership is a fee of 25 cents, to be paid in advance, and each applicant must agree to make at least two copies of this letter and send to two amateur friends, signing their name and address. In consideration of this service, upon receipt of the two names and membership fee, you will receive a cabinet photo of the warship "Maine" in Portland harbor.

This souvenir is given for securing the two new members, and cannot be sent until the fees are all received; be careful to give names and addresses, that they may be registered.

Return this letter with your membership fee, 25 cents, to

FRED. H. COLLINS,
92 Preble street, Portland, Me.

P. O. Box 446.

The Contribution Box.

THE COMBINED BATH.

I WANT to thank you for the combined bath that you have so often recommended, and the formula and instructions for working which you again give in the November number. I have now used it regularly for two years, and before that I never knew what it was to secure with ease and certainty just such tones as I wanted.

But when it begins to get dirty, although it seems to work as well as ever, I do not like it, and simply throw it away and make up a fresh pint, and it is in connection with that that I am induced to write.

I found that a freshly made solution, even after standing for twenty-four hours, did not give the best or even good tones, or gave them only after a long time, and got over the difficulty in this way: I trim my prints after printing and before toning, and as I have learned from you not to spare the scissors the trimmings are considerable. Into a new bath, after it has stood at least twelve hours, I put a handful of trimmings, amounting perhaps in bulk to two or three 5 x 7 prints, and leave them there for an hour or so, after which the bath gives lovely tones.

I know lots of people say that prints toned in a combined bath are bound to fade, but lots of mine have been so toned more than two years ago, and are still as good as ever.

AGNES SUTHERLAND.

MOUNTING GELATINE PRINTS.

I use albuma paper, and hitherto its only fault has been that it could not be mounted wet, or rather in that state it was too sticky to be rubbed down. Now I have no difficulty. I lay on the face of the print a fine cambric handkerchief ironed without folds, apply the roller squeegee, and there you are.

(Miss) L. F. GRAINER.

REDUCING CONTRAST.

The best thing to do with an under-exposed and over-developed negative that will give only hard black and white prints is to throw it away. But I *had* to make prints from just such an one a few days ago, and acting on the suggestion of a friend who, curiously enough, is not a photographer, produced results that surprised me and pleased the party for whom they were made. The object was to reduce the too great contrast between the white and black of the prints on special portrait velox, and this was attained by giving each piece of paper a brief exposure to light before putting it into the printing frame. Just how long the pre-exposure should be is a question to be determined by experiment for each negative, that of the case in question was about 1-20 of the exposure. This may not be, indeed is not likely to be, new, but it was new to me and may be to others.

WALTER RAINER.

American Interchange Slides.

SYRACUSE CAMERA CLUB.

The fifty slides from this club are contributed by thirteen members, and while there are some so purely white and black as to be unworthy of circulation, except as examples to be avoided, and some as nearly perfect as we may expect to see slides, a great majority, although a decided improvement on the sets of recent years, are sadly deficient in the most essential quality of a perfect slide, tonality or true gradation.

H. F. Smith leads with thirteen, seven of which are battleships with a temporary interest, but hardly amenable to pictorial treatment or criticism, except perhaps to say that they would all have been better of a little more development. "An Early Winter Morning," No. 34, is, however, good, and "Happy Childhood," No. 29, better, indeed, a very fine slide.

Dr. A. C. Mercer is represented by seven, "Early Morning on Milwaukee River," No. 9, being the best, and one of the best slides in the set. His portraits from negatives by E. C. Dinturff are all good, but an amateur working to please

himself should not spoil a pretty face by such a distracting feathered hat as in No. 10, and the clear glass setting of No. 13 is a mistake, as on the screen it is equivalent to letting a flood of light into the room.

J. E. Bierhardt sends five. The Roman architectural views are flat, and made worse by clear glass skies. The "Ox Cart," No. 41, and "Plowman," No. 40, are fine in composition but wanting in tonality; the latter, indeed, seems ploughing a snow-clad field.

G. P. Clark's "German Farmyard," No. 16, conveys the desired impression and is a good slide, but would have been better of more development.

D. H. Sweet shows half-a-dozen, of which "Sunset," No. 23, is by far the best. "Onondago Lake," No. 24, and "The Open Gate," No. 26, would have been fine pictures but for lack of gradation. No slide should pass muster that represents water by clear glass.

H. J. Stevens' "Cathedral Rock," No. 39, is an example of good tonality, and only needs a suitable sky to be a perfect slide.

G. F. Stillman's "A Thoroughbred," No. 37, is an attractive slide, and meets with applause when it appears on the screen, but it lacks gradation, and the scattered lights all over the background might have been avoided.

Geo. Timmins is represented by twenty-four, all very decidedly above the average, yet hardly one but what could have been made better by a more careful seeking for the values. "A Humble Cottage Home," No. 25, for example, is a fine subject, a picture in every sense of the word. But the grass in the foreground is to a large extent clear glass and therefore far from true. "Louise," No. 45, is exceptionally fine, as nearly perfect as may be, and one of the best in the set.

J. I. H. Wright, in "Bedtime," No. 50, and "Reflections," No. 36, has nothing but white and black. Light and dark without an intermediate shade should not satisfy any slide maker. This applies with equal force to No. 31, "Cattle on the Deerfield Hills," by W. W. Nicholson.

As a whole, the selection and arrangement, the pictorial qualities of the Syracuse contribution to the 1898-9 Interchange, are good, but there is still much too great a tendency to clear glass where there should be half tones. However, Nos. 9, 23, and 45, respectively by Dr. A. C. Mercer, D. H. Sweet, and Geo. Timmins, may be taken as exceptions and considered examples worthy of being wrought up to.

NEWARK, N. J., CAMERA CLUB.

This club makes a poor showing, so far as its members are concerned, the fifty slides having been contributed by five members, but it is well to the front in the quality of its slides.

Wm. Archibald is represented by twenty-five, all more than up to the average, but not by any means nearly equal. The two lightning slides, while not amenable to criticism, are as interesting as anything of the kind we have seen. The marine slides, Nos. 46, 47 and 48, for boldness and beauty are equal to anything that we have ever seen on the screen, and almost as much may be said of "Young Bulls," No. 32, and "Towards Evening," No. 45; while "On the Elizabeth River," No. 31, is a beautiful subject ruined by want of gradation. Water, sky, and much, if not most, of the foliage, are all represented by bare glass. Between the very fine or almost perfect and such as this, utterly lacking tonality, there are a number, such as "Mt. Washington Railroad," No. 38, that are really good slides, but that might

have been much better by realizing the fact that the main feature, or at least the quality without which all other qualities are worthless in a slide, is tonality or correct values.

M. I'Anson is also uneven. "Bringing in the Wash," No. 21, is a fine slide of a well-selected subject, but in "Peddie Memorial Church," No. 18, although the trees are in full foliage, the road is covered with snow and the building as if it were of white marble just from the polishers' hands. The same, or even worse, characterizes "Wild Bird," No. 22, in which there is absolutely nothing but white and black.

Dr. B. A. Robinson has some fine, artistic subjects, but all leaning to the bare glassy side. With sufficient exposure to give true values, that is, presuming they were in the negatives, every one could have been made a slide of the very highest class.

H. Eberhardt's six slides have all one serious fault, flatness. There is not a single dark that is a black in the lot, and on the screen are weak and gray. Fear of fog probably induces him to stop development too soon. Intensification sometimes improves such slides, but it is always better to secure the desired density and pluck by suitable development.

H. C. McDougall's "Scouting," No. 1, is beyond the pale of criticism, as it consists only of a few streaks of dark suggestive of a prostrate Indian, and all the rest bare glass; and Nos. 2 and 3 are not much better. A great art teacher has said that a good picture should have a little dark, a little light and all the rest gray, meaning half-lights, middle tints and half-darks, and it should be the same with a slide, but those slides have a little dark and all the rest light. They are, however, good examples of what to avoid, just as Nos. 46, 47, 48, 45 and 32, are specimens of nearly perfect slides and well worthy of being taken as models.

THE CAMERA CLUB OF NEW YORK.

We regret to learn from Camera Notes that this club has again failed to qualify for membership in the Interchange, not certainly from inability, but, we fear, from lack of interest.

Our regret at the temporary change in the method of the Interchange, a change by which the onus of selecting slides that only reached a certain standard was laid on each of the clubs instead of a committee selected for the purpose and presumably for the qualification of its members, was considerably lessened by the thought that from what we know of the very high standard of the members of the New York Club as slide makers there would be in circulation at least one set from which the members of all the clubs might learn to know what are the essential qualities of a good slide, a knowledge that, judging from many of the slides in circulation, we are sorry to say is sadly lacking.

The Camera Club of New York may have little to learn from the slides of the Interchange, but the members of the Interchange could learn much from the slides of the Camera Club of New York, and we earnestly hope that its members will not in future hide their talents in a napkin.

OUR BEGINNERS' COMPETITION.

The report of the judges in Our Beginners' Competition, Messrs. W. M. Murray and Alfred Stieglitz, reaches us just as we are about to go to press. It shall appear in our next issue, along with such lessons as a careful examination of the prints seem to teach.

Our Portfolio.

[Prints sent for criticism—*not more than one at a time*—should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*, and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in THE AMERICAN AMATEUR PHOTOGRAPHER.]

263. F. L.—“An Interior” is not an interior but only a corner of one. On one side little more than the width of a window and on the other little more than the length of a cottage piano, arising of course from the employment of a lens of too narrow an angle for that kind of work. What there is, however, is photographically good, but the beauty of simplicity would have been more in evidence without the two chairs which are too evidently placed where they are on purpose.

264. E. F. DOUGLAS.—The unnamed print is of no interest as a subject, and equally poor as a photograph. An excess of bare foreground, beyond it a strip of what is presumably water because of two parallel lines that may be docks, with, at the end of one of them a small lighthouse, and above all a fairly good mottled sky. The subject was not worth photographing, at least from the point of view selected, and the lens does not cover the plate, as is shown by the falling away at all four corners.

265. G. W. NORRIS.—“A Bit of Tyrol.” The “bit” has in the beautiful foreground the approach to a village, clustering on the right at the base of a mountain which, unlike mountains in photographs generally, really conveys the idea of size and grandeur. This is one of the most impressive views of this artistically interesting part of the world that we have seen, and is in every sense a noble picture. We shall have pleasure in reproducing it.

250. FRANK E. FOSTER.—“The Evening Chapter” is well designed but badly executed. Having got probably only a tithe of the required exposure, it is absolutely without a trace of tonality, simply a streak of unbroken white beginning with the face and ending at the bottom of the skirt, and all the rest black. Try again, placing the camera far enough away not to exclude the feet, give at least five times as much exposure and you will have a really fine picture.

267. MRS. GLEN H. FOSTER.—“Digging Taters” is a good photograph that would have been better of a longer exposure. The tonality is false; the trousers and weeds even in brightest light were never nearly so white. A longer exposure and less pushing of the development would have made it better. It is also a laudable, but unsuccessful effort at picture making, unsuccessful because of want of thought, or thought in the right direction. A man is supposed to be digging potatoes and a boy to be gathering them into a basket, but instead of hills or drills of the popular tuber, there is nothing apparent but tall grass-like weeds, taller than the boy who kneels among them. It may be that there are farmers so careless as to let a potato field so go to weeds, and that some kind of a tuber may grow so overshadowed, but it should not be immortalized as an example of American farming. Then that the man is not digging and the boy not gathering, is evident from the fact that man, boy and basket are all so close together as to make work impossible. That they are posed for the purpose is as evident as if it were written underneath. But there is worse still. The man is bent to practically a right angle and his back is within 5-8 of an inch of the top of the picture, so that if he were to stand up the head and shoulders would have been out of it altogether. It should have been an

upright, instead of an oblong, the camera removed to a distance that would have reduced the figures by about one-third, and a longer exposure given.

268. ALBERT L. SESSIONS.—"In the Yosemite Valley" is a difficult subject, a foreground of trees and the middle distance and distance a continuous rocky range. How to secure on one plate and at the same time a suitable exposure for both would puzzle the most experienced photographer, and you have not solved the problem. The rocky range is admirable, including the desirable atmosphere, and although the trees are merely silhouettes they serve to emphasize the distance. But what is the broad mass of white running from the center of the foreground away to the left and why is it there? It looks like badly photographed snow and throws the whole picture out of tone. It should have been locally reduced in the negative or toned down in printing. We shall reproduce it as an object lesson to show how easy it is to spoil, and how easy it would be to improve a picture.

269. W. T. MILLER.—"Interested." The title of this is well chosen but in a sense very different from what you intended. The sitter is *interested*, but it is in being photographed, and consequently the attitude and expression is as stiff as stiff can be. It is simply a likeness but as such is quite as good as the work of the average professional photographer, or rather, it would have been, if it had not been spoiled by the very distracting high backed chair which would be fatal to the best portrait ever made. A less, but still very objectional distraction is the high light made by the book on her lap. While looking at the print cover that with your fingers and you will at once *feel* what we mean.

270. L. H. W.—The first idea suggested by the group is that of a steeple, indicating that the figures have been crushed together too closely. For this class of picture the pyramidal form is probably the best, but in this case a broader base would have been an improvement. Then the pilaster on the right, not being in any way helpful, must hinder and should have been excluded; or if in the negative, should have been trimmed from the print. The technique is excellent and the lighting satisfactory. We may add that there was no use for so much bare foreground and that the group should not have been placed so near the background. You are on the right track, but such a group needs more thinking out and more careful study.

271. JOHN H. SCOTT.—"Along the Mountain Trail" does us good. Among so many that only show what they might have been a picture like this is refreshing. By the employment of a lens of sufficiently long focus, although a considerable track of country is included, there is nothing in the picture but what is necessary for the composition and consequently not a distracting object. A trail winding through the mountains, occupied by two figures on horseback, and so perfect is the contrast that the horses are light and dark as are the riders, and better still, the light rider is on the dark horse and vice versa. If there is a fault, it is that the feeling of atmosphere is hardly strong enough, *i. e.*, the distance is just a little too clear, arising probably from the employment of too small a stop. It is, however, in every sense of the word a beautiful picture that we shall have pleasure in reproducing.

272. W. L. BENEDICT.—"October," so called we presume, because of a field of corn "shocks" in the foreground. It is a much too flat photograph of an extensive track of uninteresting country, a mixture of arable land and clumps of stunted trees, but on a scale too small to be topographically useful, and of no pictorial value, as it possesses none of the essentials of a picture except a fairly good sky. It suggests nothing not visible, has no contrast, as there is neither a light or

even half-light, only an expanse of even dark, half-dark and a little middle tint, and not a trace of atmosphere; the extreme distance being as well defined as the foreground and the sky line as clearly cut against the sky as if cut out and pasted on. Lighted so as to give sufficient contrast and on a larger scale it could have been made a fine topographical photograph, but hardly under any circumstances a picture.

273. ARTHUR GAUSE.—The point of view of "The Porch" is well chosen, but the lighting could not have been worse. It is as completely covered with specks or points of light as if chalk in powder had been scattered all over from a pepper box.

274. F. H. FERRIS.—"Successful." A sportsman standing beside his horse, across the back of which is laid the outcome of his gun, an antlered deer. A longer exposure would have made it a better photograph and represented the sky by something else than white paper, and the hunter himself should have been doing something else than stiffly staring at the camera. The position of the horse was probably chosen as giving the best view of the deer, but something different and better might easily have been found.

275. C. H. HAMILTON.—"A Cool Retreat" is a fine selection from a good point of view, although it would have been better if the line of rock in the foreground had been made to go at an angle instead of horizontally across. The principal fault, however, is false tonality, the whole foliage being simply white paper. It is a beautiful subject badly photographed, under exposure and forced development being the probable cause.

276. W. CASE.—"Little Runaway" includes too much print and too little figure. The $6\frac{1}{4} \times 4\frac{1}{2}$ should have been trimmed to about $4\frac{1}{2} \times 3$, and it would have been much better not vignetted, especially as that operation has left the little figure nothing to stand on. The scattered high lights all over the background attract the eye unpleasantly, and the lighting is altogether too hard and patchy. You are on the right road for good work, but a picture requires much more thinking out and study than this has got.

277. J. G. JENKINS.—"Othalie" has some good qualities, but they are more of the "professional" than the art stamp; of the "likeness" rather than the "portrait" variety, and, so far as the likeness goes, it is doubtless very good. The lighting is faulty in so far as it relegates to absolute darkness several parts important enough to require at least suggestion. The figure as a whole is stiff; the large sleeves, which a professional photographer might be forced to submit to, should not be tolerated by one who works to please himself, and the patches of light above the head and below the waist have a distracting influence. It is a "home portrait" and, in spite of those faults, possesses good qualities enough to show that with a responsive model and more careful thinking out, you will make photographs that shall be fine pictures.

278. H. D. ALLISON.—"Appleton Farm" is a beautiful pastoral scene, excellent in selection, lighting, *motif*, and in fact almost every quality necessary to a fine landscape. The contour of the foreground, aided by the row of cattle, leads the eye up to the homestead, in which, small as the space it occupies is, lies the center of interest, and in it also is to be found almost the only fault in the picture. It is very obviously leaning to the left, a fault that should have been obviated by trimming. It is a fine picture that we shall have pleasure in reproducing.

279. JOHN HANNA.—"A Portrait" is only a likeness, but a very good example of the professional class of work. But this applies to the head only, and the good

head is spoiled by the appearance of the cape on which it rests. It is a cone, from the apex of which radiates a series of lines like the spokes of a wheel from the hub, utterly destructive of pictorial effect. It makes us think, but only of the conjurer who throws an empty cloth over his hand and makes the head of a doll pop up through the hole in the center.

280. RICHARD HINES, JR.—“Chrysanthemums” is a fairly successful attempt at a difficult subject; and would have been more so with a much longer exposure. For such work an orthochromatic plate, or at least, a plate sensitive to the green is essential, and the exposure must be long enough to impress the leaves as well as the blooms.

281. ALBERT FORDEN.—“Along the Casco Bay” is a finely selected subject with a finely composed foreground and a satisfactory sky; but the only indication of bay, or at least of water, is in the title. In consequence of much too short exposure development has been forced till what should have been water is simply unbroken white or nearly so. The water was not nearly so white, and the corn and trees were not nearly so black; in other words, the values are altogether wrong, and wrong from under exposure; but we shall reproduce it as an object lesson.

282. JAMES L. JENKS.—“Cranberry Pond.” The fault here is a too high horizon, giving to the water the appearance of an inclined plane, with nothing in the foreground by way of compensation. With the horizon about a third from the bottom, and the difference given to the beautiful sky, this would have been a fine picture. Never place your horizon in the middle without some very good reason.

283. C. A. PRICKETT.—You could have hardly have made a worse selection if you had tried. An utterly unpicturesque bridge going straight across the print would spoil any landscape, no matter how otherwise perfect. The ability to make pictures, no more than the ability to do anything else, does not come without study, and very much of it. Study some work on art, say, “Pictorial Effect in Photography,” by H. P. Robinson, and you will never again waste a plate on such a subject.

284. W. H. STANCHFIELD.—“October Evening” is an exquisitely beautiful bit of cloudland sadly marred by the silhouettes of a row of trees, with nothing under it but a mass of black and an indication of water with a series of equally black vertical and parallel reflections. Suggestion is the soul of picture making, but such black masses do not, to us at least, suggest anything but very much under exposure. We may add that, in our own opinion, printing under an oval mask is almost always a mistake.

285. E. M. MILLER.—“Brotherly Love” is a charming little picture, and would have been more so if taken upright instead of oblong; and, as it is, it is improved by trimming off three-quarters of an inch from the right and one inch from the left. The figures, a boy drawing his little sister in a sled, are complete in themselves, and their action is perfect, so that the trees to right and left are unnecessary and a little distracting. Its only fault is want of true tonality, being simply white and black. A slower shutter, a larger aperture, or quicker plate was required. We shall reproduce it.

286. C. S. MOORE.—“Seeking Solace,” and we should say, finding it too, is one of those portraits that once seen is never forgotten. Not for its beauty, for it has none; but because of the something that makes it different from mere likenesses, the something that makes one feel that the outward and visible part of the picture

is the least of it, and only there for the purpose of revealing the soul within. It is only a man on whose face the cares of life have made their mark, smoking a cob pipe, but it is a striking proof of the fact that the man behind the camera may be an artist. (See page 57).

287. W. E. SMITH.—"On the Pautexit," which has been already noticed with approval, is much improved by well printed in clouds, and we shall have pleasure in reproducing.

288. "Ploughing" is a rather hackneyed subject, but this is quite as good as any examples that have come; although where the horses are dark and light instead of as in this case it is more effective, contrast being always a valuable feature. We shall reproduce it, also "The Pond," in our next.

289. F. R. MILLER.—"Despair" is a laudable effort in a difficult class of work, and to a considerable extent successful. A weary woman, her head resting on her hand beside the sewing machine and the poorly paid work on which she has been engaged, but with her sad thoughts far away. Cold and discomfort are suggested by the way in which she is wrapped up, and while by better training the expression of utter hopelessness might have been intensified, it is sufficiently blank to be fairly satisfactory. The most pronounced fault is the shapeless form of the hand on which she leans, a shapelessness all the more to be regretted because it is a prominent high light. A lesser fault is the too high key in which the work on which she is engaged is struck. The objective point is the face of the figure, and this mass of light instead of leading up to it has a tendency to draw the eye away from it. It is, however, so near to success that it is well worth trying again, and with a slightly different lighting. A high degree of success in such a difficult branch of work is reached only after much study and many trials. We reproduce it on page 51.

290. C. M. FARGO.—The unnamed print is a good subject that could hardly have been worse photographed. A sheet of water in the foreground with foliage on right, left, and in the distance, but the foliage, especially on the left, is speckled over with white as if dusted with flour, and the large expanse of sky and water are represented simply by white paper. Under exposure and forced development have resulted in a negative not worth printing from.

291. G. P. LESTER.—"Solitude" is well selected and well suggests the idea of the title, but the exposure has been too short, resulting in a much too dark mass on the left, and development has been pushed in consequence till the sky is much too light in tone. There is also no trace or suggestion of atmosphere, the extreme distance being as clear and well defined as the foreground. You should have employed a much larger stop.

292. J. S. SUMMER.—The little unnamed print is a pretty photograph, but like most snap shots, considerably under exposed. The selection leads us to think that you are fit for better work than can be looked for by snapping.

293. RICHARD RILEY.—"Sunset" is a fair average example of a class of photographs that, in spite of the fact that the scene represented owes its glorious beauty to color that cannot even be suggested, is becoming hackneyed. A high degree of success is dependent on a happy arrangement of cloudland, and while in this, what there was has been made the most of, we have seen much better; but it possesses the great advantage of finely concentrated light leading the eye unerringly to the objective point, a feature too frequently missing. The most serious fault is the

representing of the landscape portion by absolute black, especially where there is so much of it, and nothing short of a much longer exposure or its equivalent could have made this "sunset" what it should have been.

294. DR. J. Y. SIMPSON.—"A Winter Morning" is in almost every respect a satisfactory representation of a wintry day. Selection, composition and lighting are all good, but the horizontal dark line right across the foreground should have been excluded or trimmed off. We shall reproduce it as an object lesson, that readers may, by covering the objectionable line, see how easy it is to spoil or improve a picture.

295. W. E. COGSWELL.—"When Grandpapa is Away," a boy with spectacles on nose and pipe in mouth reading a newspaper, is well arranged, but considerably under exposed. It only needs more correct values to be a little gem.

296. ERNEST WILLIAMS.—"A Winter Scene" is a very good photograph of a not very well selected subject. A different point of view might have given something better. It is a good example of photography as a means of reproduction.

297. F. E. BRONSON.—"Winter." What was said of No. 296 applies equally to this, except that we doubt that the very unpicturesque bridge would have given a good picture from any point of view. It is an excellent photograph but nothing more. A great improvement would have been to break up the large expanse of white foreground by a well trodden path, and the exposure should have been made when the sun was low, so as to get some indication of light and shade on the snow.

298. C. F. H. in his unnamed photograph has missed a good opportunity. It is a very good photograph that could have been made a fine picture. A lady naturally, and so gracefully, seated on a rock, a gentleman standing, with one foot on the same, leaning on an umbrella and holding his hat with an awkward twist of the wrist, evidently saying something that pleases her. But his pose is stiff, and the idea conveyed is that he has just come up, a serious mistake, as such couples do not meet in or near a wood by chance; or at least a very different and better impression might have been conveyed. The photography is very good, but one inch should have been taken from the rather bare and excessive foreground.

299. E. W. TANNER.—There is really nothing to criticise in the bit of cloudland sent, unless that it has not been well focused. It was a combination hardly of sufficient interest to be worth photographing unless as the sky of a landscape.

300. C. W. PLUM.—"An Interior," a flashlight exposure on three children at play, is a very pretty little picture, and of better technique than any flashlight that we have seen. The "Water Sprite" noticed some time ago was not underexposed. Its charm lay in the fact that the water was only suggested, not depicted; a longer exposure would have ruined it.

301. J. E. ROYS.—"Stepping Stones," a girl standing on a stone on the margin of a sheet of water with the wavelets rolling in and by, is of excellent technique, a fine photograph but of no particular interest.

302. ALÉCK.—"November" is on the "impressionistic" side and conveys very well the idea of "November sad and drear." Its somewhat serious fault is an excess of patchily lighted foreground, the trimming off of nearly a half of which is a great improvement.

303. R. A. MILLER.—"A November Day" is a pretty photograph of the record of fact kind, with no pictorial quality, and but for bare branches, might be of any season. The middle of the road is rarely a good point of view, and a stop small

enough to depict the extreme distance as sharply as the foreground and so prevent all sense of atmosphere is always fatal to pictorial effect.

304. LOUIS DYAR.—"The Reader" should have been called the sleeper, the face of the boy being absolutely expressionless. He is too low on the plate, which gives a dwarfed or bunched appearance. It is, however, an attempt in the right direction, and with more careful thinking out, and better training of the model you will reach success.

305. E. A. DONNALLY.—"Speak" is a fine rendering of a somewhat hackneyed subject, a boy holding up his hand and inviting a beautiful dog to "speak." The pose in both cases is perfect. It is well worth printing with a more suitable or at least more attractive background. We shall reproduce it with pleasure.

306. CATHARINE SOPER.—"A Lonely Ford" is one of those photographs that once seen are not likely to be forgotten; that we turn to again each time seeing something new to admire, and each time making deeper and deeper the impression sought to be conveyed by the artist. It is one of the alas! too few photographs that must go far to convince the most conservative artist of the brush that photography has a claim to be regarded as a means of producing works of art even with a big A. *Motif*, composition, lighting and values are all satisfactory. We reproduce it (page 53), and have pleasure in welcoming Miss Soper as one of our best illustrators.

307. R. J. PECK.—"Evening" is not a success because the only impression it conveys is that of a very much under exposed photograph. It is a fine subject from a well selected point of view, but its total want of values, its simple range of black and white without a trace of atmosphere or that subtle evening light—the "shades of evening," in which the charm of such pictures, when they are good, lies, deprives it of pictorial value. With a long enough exposure it might have been a great success.

308. E. A. PARDEE.—"In Quiet Woodland" is a fine selection utterly spoiled for lack of exposure. It is a path through the wood in full foliage and yet the ground and parts of the leafy glade are white as if covered with snow. Nothing but want of sufficient exposure keeps this from being a fine picture.

309. HARRY A. JOHNSON.—"Country Road" is a very good subject and might have been made a good picture; indeed the only thing wanting is exposure, but it is wanted badly. It is simply white and black and consequently altogether untrue.

310. LOUIE SMITH.—"Ol' Negro Cabin" is of no interest whatever, being very little more than a confused jumble that even the title does not make plain. A building of any kind should never, unless for some particular reason, be photographed from right in front, and although "suggestion rather than depiction" should be the aim, the arrangement should not be so confused as is this.

311. H. W. CHURCHILL.—"Putnam Drive" is a fine subject from probably the very best point of view, but rendered worthless from under exposure. But for the patch of white paper made to represent sky, and the equally white stems of some of the trees it might be a midnight view; nothing but black. At least three or four times as long was required.

312. EDWIN E. REED.—"Sunset" has only one serious fault, a very much falling away of the water on both right and left of the foreground. It is a pretty representation of one of Nature's most glorious aspects; but why trim so carelessly? The horizon line is nearly four degrees off the level.

313. G. M. MARTIN.—“Golly! Dis Am Paradise!” is an excellent photograph of a study that might have been made a good picture, instead of which it is merely an uninteresting and not even pleasant grotesque. A negro seated on the floor with legs distended, and holding in his hands the half of a watermelon, is supposed to be in his glory, while the real fact is that the lucious mouthful is not at all in his thoughts, as he is sitting for his photograph and staring at the camera. The “drawing” is also absurd. The lens has been so placed as to make what should be a level floor an inclined plane, an incline so steep that the foot of a table only a few feet behind the figure is on a level with his shoulder. We take picture making by photography seriously and regard such efforts as this as prostituting the art.

314. E. A. J. FULLER.—The unnamed print is very good in design and composition and misses being a good picture for one fault, under exposure. This has necessitated pushing development till the lights are far too hard, especially the mass of the music book, and left the shadows without detail. Sufficient exposure would have made this a little gem that we should have been glad to reproduce.

315. W. W. BOLTON.—“King Phillip's Cave” is a fairly good photograph that would have been better for longer exposure, but of a subject of no pictorial interest.

316. G. A. CUSTER.—“A Kentucky Turnpike” is better than anything that you have hitherto sent. Photography, composition and lighting are good, and so also is the selection. The title, however, is a little at fault, or rather a different title would have suggested a subject for thought. As a “turnpike” it is simply a fine photograph of a portion of a highway of no peculiar interest; but write underneath “Youth and Age,” “Life and Death,” “As I Am So Shalt Thou Be” or something of that kind, and the eye will no longer care for the highway but for the lesson of life taught by the two prominent trees, the one in robust health and full of foliage, the other dead, leafless and almost branchless. Good as the picture is, and we shall have pleasure in reproducing it, it would have been better if at the time of arranging it the thoughts we have suggested had been in your mind. The ideal of picture making is to have an impression and seek in the picture a means of conveying it.

317. HAROLD C. RISING.—“The Portrait,” so far as it goes, is in every respect fine, the pose and expression beautifully natural, and the lighting faultless. The one fault, and it is serious, is the distracting row of points of light on the back and down the side of the chair, which *will* take the eye from the interesting face. You have in this a proof that as fine portraits may be taken in an ordinary room as in the best equipped studio, and should stick to portraits. We shall be glad to see more of your work.

318. W. E. SMITH.—“The Pond” is a fine subject from not the best point of view. The horizontal line in the foreground, repeated by a similar line in the middle distance, and both again repeated by the upper and lower margins of the picture, gives a feeling of weariness to the composition, and the exposure has been insufficient to give anything but white and black. The stop has been too small, making the distance as well defined as the foreground, and depriving it of even a suggestion of atmosphere; the really good part is the fine cloudy sky, although from a different point and with a much longer exposure it could have been made a fine picture. We shall reproduce it as a good object lesson.

319. DR. C. E. TEGTMEIER.—“The Drive” is a finely selected subject from prob-

ably the very best point of view, but with two fatal faults. (a) The exposure has been so much too short that there is nothing but white and black, and the road is as if thickly sprinkled with snow. (b) The lens employed has been of too short focus, the result being that the foreground and foreground objects are exaggerated to such an extent that the drive seems broader than it is long. To reproduce such a subject properly it is imperative that the lens be at least once and a half the length of the base line of the picture, and twice that length would be better.

320. F. A. BRAGDON.—"Solitude," a lady sitting reading under a yellow pine, is a good photograph considerably lowered in value by a white paper sky, a fault now no longer to be tolerated. The figure is good, but the surroundings are not of much interest. True picture making needs more thought than this has got. Ladies do not go into the country minus headgear of some kind, and if they should remove the hat while under the shade of a tree it would be found beside them. As it is, the 7 x 5 print might with advantage be trimmed to say 4½ x 3½.

321. B. K. R.—"In Bedford Glen" may be a picturesque subject, but it is difficult to see just why it was photographed as it is. It suggests nothing and conveys no impression and so has no pictorial quality, and as the exposure has been so short as to give only white and black, black water, black trees on which is a sprinkling of white, and white stones, it does not belong to the reproductive class.

It is therefore simply a very much under exposed photograph of no particular interest.

322. S. I. CARPENTER.—"That Old Familiar Tree" is a fine example of the reproductive phase of photography. Without any claim to pictorial effect, and simply by good technique, the old knarled tree under which generations have sat is vividly reproduced, and would have been even more so by a little longer exposure, although the white sky here is not so objectionable as in photographs aiming to be pictures. We shall reproduce it.

323. G. M. ROBINSON.—"The Old Saw Mill" is a picturesque subject that might have been made a fine picture, but you have missed it. The point of view is about the worst, as a building rarely looks well taken straight on; and, worse still, the lighting has been such that the greater part of the print, including that part of the building facing the camera, is simply black paper. Try again from considerably to the right and under a very different light.

324. A. W. PAYNE.—"There Is Always Room for One," a man stepping up to take his seat on a well loaded wagon, is a very much under exposed snap shot of an utterly uninteresting subject. With an exposure three or four times as long it would have been of interest to the owners of the horse, but to no one else.

Our Table.

TOLIDOL.—We have to thank the Haller-Kemper Company for a further supply of this most excellent developer, which the more frequently we use the better we like. It possesses all the qualities essential to a perfect developer and is equally suitable for all kinds of development on all varieties of material; and in consequence of its unusually strong developing power is probably more economical than any reducing agent in general use.

Along with the pure tolidol came some tubes or capsules similar to those mentioned in our November number, but specially prepared for the development of velox paper, for which purpose they are simply perfect.

PICTURESQUE SCENERY AND INDUSTRIAL VIEWS.—We have to thank Mr. H. C. Townsend of St. Louis for a series of very fine photographs of the picturesque scenery along the Missouri Pacific and Iron Mountain railroads, with which we shall have the pleasure of from time to time adorning our pages. Through his kindness we have also had the pleasure of adding to our collection a beautifully got up album of the same class of subjects, both pictorial and topographic, all of excellent quality and such as to make us wish to start instantler with our camera to such a happy hunting ground.

VIEWS OF CAMP MCKINLEY.—E. M. Miller sends us as views of Camp McKinley several very good photographs, including the "Living Flag," evidently printed on velox, and a portrait of himself, for which he has our hearty thanks. Richard Hines, Jr., of Mobile, has also taken the hint which we gave some time ago, and enabled us to add his likeness to our collection. It is always gratifying to see portraits of those with whom we correspond or try to help, but whom we may not see in the flesh. *Verbum sat sapienti.*

THE PHOTOGRAPHIC IMAGE, a theoretical and practical treatise on development, etc., by P. C. Duchochois, New York: William R. Jenkins.

There is nothing in this that is new, but very much that is true, and much of which the general photographer is ignorant, but that he would be much the better for knowing. It is all tersely and plainly put, and while not exactly filling the role of an ordinary hand book, it contains just such information as is desired by the more advanced pupils.

But we are a little surprised that one who writes so well should indicate, as he does in the preface, that a negative is faulty if the sky is not opaque. It is not less surprising that while speaking of actinism he says that it is measured by a photometer. We are aware that less learned men make the same mistake, but we cannot believe that the author of this very useful book does not know the difference between an actinometer and a photometer.

IN NATURE'S IMAGE.—By W. I. Lincoln Adams. New York: The Baker & Taylor Company. This beautiful volume may be said to be a continuation of or supplement to the equally beautiful "Sunlight and Shadow," by the same author. It tells, and tells so well, both by precept and example, how to make pictures by photography, that it should be in the hands of everyone who aspires to be an artist as well as a photographer. It is really an *edition de luxe*, fit ornament for any drawing room, and a milestone in the progress of artistic photography, as its illustrations include examples of the best work of some of the best workers in this and other countries.

NATURAL HISTORY IN THE STEREOSCOPE.—We are indebted to John G. Baker, of Philadelphia, for a series of very fine stereoscopic slides of natural history subjects, including spiders, flies, beetles, etc., and think that he has struck out for himself a new and very interesting branch of photography. They are all of excellent quality, and so real do they appear in the stereoscope that one of them elicited a scream from one of our lady friends when she put the instrument to her eyes.

THE HOLY SHROUD.—Several months ago we noticed the photographing by Signor Secondo Pio, a lawyer of Turin, of the alleged miraculous image of our

Saviour on the Holy Shroud. A reproduction from the negative so obtained appeared as a supplement in the Christmas number of the *Photogram*, the demand for which was so great as to exhaust the edition and induce the proprietors to issue a special reprint, not of the whole number but of the supplement. For a copy of this we have to thank the editors; and whatever view may be taken of the alleged miracle they deserve the thanks of all—which is surely everybody—who are interested in such subjects.

THE A. M. COLLINS MFG. COMPANY send samples of a great variety of mounts of all shapes and sizes, and of various shades of gray and green. They are all of excellent quality, and the photographer who cannot among them find just what will be most suitable to enhance the value and beauty of his work must have poor taste or be hard to please.

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr John Nicol, Tioga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

LACROSSE CAMERA CLUB.

The second annual exhibition of this club, mainly the work of members, showed a marked improvement on that of last year. There were some 200 pictures on the walls, mostly landscapes, and of those the work of Mrs. M. B. Greenwood seemed to be most generally appreciated, although she was closely followed by Mrs. James McCord and Mrs. L. C. Colman.

The exhibition on the whole was very encouraging, and the thanks of the club are due to Mr. D. C. McMillan for the great degree of success it attained.

TOPEKA CAMERA CLUB.

This club recently held a successful exhibition of the work of its members which fairly surprised the public when its doors were opened. A. W. Tanner's prints in various colors, mainly scenes in Mexico, were much admired, and showed the advantage of the employment of something else than the usual photographic shades of purple browns. Mrs. D. J. Hathaway's collection of castles and cathedrals attracted considerable attention, as did W. E. Culver's enlargement of the gateway to the Garden of the Gods.

THE MOBILE CAMERA CLUB.

At the annual meeting of this club, held on January 13, the reports of both secretary and treasurer were favorable; suitable meeting and dark rooms having been secured, the membership considerably increased, and a satisfactory balance on the right side of the cash book.

Arrangements were made and a committee appointed to get up an entertainment for the benefit of the club, and for demonstrations of slide making and the employment of tolidol as a developer.

The election of officers for the year resulted in the appointment of Hugh Rolston as president, C. S. Shawhan vice-president, and Richard Hines, Jr., secretary.

The Club gave an exhibition of lantern slides and pictures on January 6th in the rooms of the Art League, and considering the inclemency of the weather there was a very good attendance of the guests invited by the club, the large room being comfortably filled.

The lantern exhibition consisted of 100 slides made by members of the Camera Club of New York, including such well-known workers as W. P. Post, A. P. Shoen, John Beeby, W. A. Fraser, Alfred Stieglitz and Charles Simpson.

Dr. W. B. Pape, president of the club, was the lanternist, using his fine electric light stereopticon for that purpose. He was assisted by W. E. Wilson and Charles McCosker.

There were 100 slides in the New York collection, and these were interspersed with statuary and colored dissolving effects from Dr. Pape's collection. Fraser's flowers and night scenes. Stieglitz's "Scurrying Home," "The Letter Box," his night scenes, and in fact all of his contribution were greatly enjoyed, as were the scenes from Norway by Charles Simpson and the ice scenes at Niagara by W. B. Post. The finale was "The Rock of Ages," a colored dissolving set, which was very much admired. Many of the slides were applauded.

The pictures displayed by members of the club showed that considerable progress has been made by those displaying since the exhibition in July last year. There was also noted a change from the print out papers to velox and other developing papers which give much more artistic effects. Mrs. Charles S. Shawhan, one of the most indefatigable workers in the club, made a very creditable display, her story of "The Sick Doll" being well conceived and well executed. It consisted of four prints entitled "The Diagnosis," "The Prescription," "Measuring the Dose," and "Holding Baby's Nose." The prints were on velox and were mounted in an embroidered frame beneath circular cutouts.

Miss Belle Tilden, a novitiate in the amateur ranks, displayed some nice prints taken during her summer jaunt, and also some very fine work by W. W. Gibson, of Washington, a former Mobilian.

Percy Hines showed a number of prints of scenes at Vanderbilt University, including one of the champion Freshman football team and several of the first snow of the season at that institution. He also showed two of his last year's studies in platinum, "A Bit of Shell Road," and "Barton Academy."

E. W. Faith made a display of some nice prints of several historic places in Alabama, and Mrs. Albert Pillichody had a few well arranged prints on the wall.

The secretary, Richard Hines, displayed some prints from Algiers, Africa and Canary Islands, brought to him by Captain Leganger, of the British steamship Bencliff, and also two pictures of his own—"Cloudland," a blue print, and "Chrysanthemums," a flower study.

J. W. Daniell made a very interesting exhibit of a number of local scenes, as well as several in Indiana and other States.

The exhibition was very much enjoyed by all who attended, and gave evidence that the members of the Camera Club are making good progress.

THE MINNEAPOLIS CAMERA CLUB.

We must, to the secretary of this club, award the palm for regular information as to its operations, and congratulate the members generally on the zeal and energy with which they are carried on.

Since our last notice they have yielded to the pressure and raised the limit of membership from 50 to 100, had demonstrations in developing negatives, positives on celluloid, printing on bromide and velox papers, and aristo toning; and exhibitions of interchange slides from Rockford, Philadelphia, Lancaster, and the work of the members.

They have also introduced a feature to which we wish to call special attention, namely, the bringing of one or more pictures, especially by the most advanced of the workers, for particular and exhaustive criticism. This is well worth copying by other clubs, as if properly carried out, and especially if some one well acquainted with art can be induced to take part, its educational value will be very great.

CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS.

We have to thank the secretary of this flourishing society for a copy of its constitution, by-laws, and list of members, in the honorary class of which we are pleased to see our name. An attractive circular has been issued setting forth the advantage incident to membership and containing some very fine half-tone engravings from the work of the members. The programme for the season, December 7th to June 28th, shows that the directors are fully alive to the necessities of such associations, and from what we know of the members and the facilities afforded by their quarters in the Art Institute, we may safely predict that the Chicago society will soon be in the van

THE CAMERA CLUB OF NEW YORK.

The Camera Club of New York began the month of January with the second annual smoker and musical entertainment on the 7th. The regular business meeting occurred on the 10th of January and between January 10th and 28th an exhibition of the prints of the Postal Photographic Club was held. It was an exceedingly creditable exhibit, participated in by a number of members. The improvement in the character of the work over the earlier albums is very noticeable.

On January 19th Dr. J. N. Bishop gave a private illustrated lecture to his friends on the subject of "Honolulu and the Hawaiian Islands." Mr. Herbert J. Riley lectured on January 24th on "Manila and the Philippines," illustrated with lantern slides.

Rules have been issued for the club competitions pertaining to "The Lantern Slide Champion Cup" and "The Presidential Print Prize." The competitions occur in March and November, 1899, and in May and November after that. There is to be a board of three judges and slides and prints are to be judged on the basis of fifty per cent. for "art" and fifty per cent. for "technique."

Letters to the Editors.

PHOTOGRAPHY IN COLOR.

DEAR SIR: In commenting in your December number (p. 333) on my recent patent, you have unwittingly done me an injustice.

I am far from considering myself the first to attempt color-printing by the use of multiple-coated carbon tissue. On the contrary, the devices of Messrs. Van

Camp and Long, as also several other essays in the same line, were very well known to me. But the main feature on which my patent was granted is precisely what differentiates it from all previous attempts, viz., the use of stratified arrangements of colors in a homogeneous film of carbon tissue and the method of producing it. This is my substitute for the multiple-coated tissue and constitutes the whole gist of my invention.

Yours faithfully,

CORWIN GITCHELL.

San Francisco, Cal., January 7, 1899.

INTERCHANGE SLIDES.

DEAR SIR: I heartily endorse your suggestion to collect and circulate a set of slides as nearly perfect as possible, as it must be evident to anyone who sees the ordinary Interchange sets, that many, very many of the contributors do not really know the qualities essential to a good slide.

I make the assertion as the outcome of a careful examination of most of the sets in circulation, which shows unmistakably that, as a rule, the faults of the slides, excess of bare glass and want of gradation, are not due to the negative, but to improper exposure and development.

I sympathize with you in your regret that the New York Camera Club is again an outsider, but know that many of its members possess many fine slides, and my object in writing is to suggest that the General Manager of the Interchange should endeavor to borrow from them, say, fifty of the best and put them into circulation, as proposed by you, as examples worthy of being wrought up to.

Yours, etc.,

E. A. MURRAY.

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander & Davis), Washington, D. C., from whom copies of the patents may be had.]

JOHN A. MOSHER, Chicago, Ill., assignor to Adams & Westlake Company, of Illinois.
Shutter—No. 615,296.

This shutter comprises two leaves pivoted on a common center and swinging past each other, and, having openings which simultaneously register with the lens opening. A spring is provided to cause the leaves to swing and this spring may be normally adjusted to operative position. A dash pot is connected to the spring actuated lever which swings the leaves of the shutter.

ALFRED BOGISCH, Feuerbach, Germany, assignor to J. Hauff & Co.
Photographic Developer and Process of Developing—615,792.

A developing solution for photographic negatives, composed of an alkaline aqueous solution of the halogen substitution products of dioxvbenzenes, substantially as set forth.

JAMES H. SMITH, Chicago, Ill.
Developing Tray—No. 616,152.

The tray is formed with inclined sides and a substantially flat bottom, a por-

tion of the bottom adjacent the sides being slightly inclined so that the bottom has a main flat portion and a slightly inclined marginal portion.

FRANK R. HALL, Boston, Mass.

Plate Washer—No. 617,335.

A box is formed with vertical grooves on its side walls, and is of a length to receive plates of one size and of a width to receive plates of another size. A removable partition is provided having grooves on its faces, so that by placing partition in proper groove in end walls of box, small plates may be washed.

Chicago Chemical Works, Chicago, Ill.

Trade Mark—32,164.

Essential feature: The word "Tolidol." Used since February, 1898.

Answers to Correspondents.

[Communications for the editors, pictures for criticism, and apparatus and material for examination, should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*]

A. F. KUHN.—No definite instruction as to "timing interiors" can be given. So varied are the degrees of illumination that our exposures have varied from one minute to from Saturday at 2 p. m. till Monday at 10 a. m. Practice is the best guide, but we know beginners who have found both Wynne's exposure meter and the more recently introduced expodak very helpful.

J. G. JENKINS.—The "illumination of the ground glass" depends on the size of the stop, not on the diameter of the lens, and for indoor portraiture a portrait lens is better than, say, a rectilinear only because it works at $f/4$ and is consequently four times quicker than the latter working at $f/8$. "Made with $6\frac{1}{2} \times 8\frac{1}{2}$ lens" is meaningless. The focal length and not what a lens may be made to cover is of importance.

FRED. M. VAN DERVOORT.—The *raison d'être* of the awards at some of the exhibitions is not easily seen, nor is it easy to say just wherein consists the beauty of the work of the artists you name, but it is there all the same. The art that may be in a photograph is not dependent on its being sharp or out of focus, but on the extent to which it conveys the impression desired by its author, and it may be a good likeness without being a portrait, or the converse, a good portrait without being a good likeness. Our append to a letter on page 326 of our July, 1898, number will help you to understand what we mean, and we may add that one of the greatest aids to picture making by photography, at the same time that it is one of the greatest difficulties that the photographer has to meet, is the suppression by diffusion of focus or otherwise, of everything extraneous to or not necessary for the composition. Regarding the reproduced portrait, we did not say it had only one fault, but that the only mistake was placing the light against the light of the background; and that was with special reference to the method of lighting, not to its pictorial quality. Speaking of it from a pictorial point of view we should have to class it as a good example of the higher class of ordinary professional portraiture; what has recently come to be designated as "the usual thing."

Notwithstanding the letter of Gorham Dana on page 327 of the number already referred to, we have no hesitation in saying that with ordinary and sufficiently intelligent care the use of acetylene from a properly constructed generator is attended with no more danger, indeed not nearly so much, as the use of house gas or kerosene. There are already thousands of small generators employed in lantern illumination, and there is yet to be recorded a single accident not traceable to carelessness or ignorance, or, which is generally the case, to both combined.

EVELYN HARRIS.—We have no knowledge of the college you mention except through its advertisements, nor can we advise you without knowing the object you have in view. If you write again please notice the instructions at the head of this column.

ALFRED L. FITCH.—We cannot spare room here to tell you how to make printing out paper. You may find all about it in "Aristotypes and How to Make Them," to be got from our publishers.

C. F. HAGEMAN.—The lens mentioned is quite good enough for all round work, if the focus be long enough, not less than once and a half the length of the longest way of the plate. Focus a distant object and the distance between the ground glass and the diaphragm will be near enough the focal length of the lens for practical purposes. The plate you mention is as good as any other and is about $f/80$ on Wynne's exposure meter. The best developer is that with which you are best acquainted. Practically they are all equally good.

FRED J. MABIE.—We do not reply privately. (1) special portrait velox. (2) special rough velox or carbon velox. (3) For enlarging from, the negative should be of medium density and ample detail. (4) The developer with which you are best acquainted is the best for you. We do not recommend any paper in particular. (5) $f/16$ or $f/22$, depending on the nature of the subject. (6) To secure perspective that will appear to be true the portion of a negative by a lens of 6 inches to be enlarged should not exceed, say, $4\frac{1}{4} \times 3\frac{1}{4}$. Before writing again please read the notice at the head of this column.

J. A. ANDERSON.—We understand that Steffens of Chicago includes the making of daguerreotypes as a branch of his business. Our first coating boxes were made by grinding with emery and water on a flat stone the mouths of ordinary gallipots till they were air-tight when covered by a piece of "patent plate" glass, and they answered the purpose very well.

R. G. PECK.—We cannot spare room for instructions for the making of carbon tissue, because it can be bought better and cheaper than you could make it. See page 539 of our December number. You may take our word for it that the writer to whom you refer is one of the most generous and big hearted souls in existence, and his desire is only to be helpful. When we tell you that he spent over forty years of his life as a teacher and lecturer on chemistry you may be better able to judge as to his knowledge. For direct work $8\frac{1}{2} \times 6\frac{1}{2}$ is, for many reasons, to be preferred; but our favorite method at present is to employ our Bullard hand camera on a stand, and from the 4×5 so made to select about $4\frac{1}{4} \times 3\frac{1}{4}$ for enlargement to 8×10 .

CHAS. S. DAVIS.—You will find all your questions fully answered in "The Right Road to Photography," to be got from our publishers.

ALBERT N. CHITTENDEN.—Yes, add two ounces of your solution to fourteen ounces of water. The hypo is as good as ever.

C. F. SCHROEDER.—See page 452 of our October, 1898, number.

"Index Rerum Photographic," by Dr. John H. Janeway, U.S.A., continued from page 44, Vol. XI.

stance. All these salts of zinc have an acid reaction, turning blue litmus red. They cause vomiting if taken internally, which is fortunate, as they are strong poisons.

ZINC HYPOCHLORATE.— $\text{Zn Cl}_2 \cdot \text{O}_2 = 168$. This salt of hypochlorous acid may be prepared by adding a solution of zinc sulphate to a solution of calcium hypochlorite and then filtering off the insoluble calcium sulphate formed. In this state it will be mixed with zinc chloride, but this latter substance will not interfere with its use as a hypo eliminator. Its use in photography depends upon the fact that a solution of hypochlorite of zinc will dissolve hyposulphite of soda, so that it is used to eliminate hypo from prints after clearing. When a neutral solution of hypochlorite of zinc is added in excess to a solution of hyposulphite of soda a mutual reaction takes place between the two, sodium, hydrogen sulphate and zinc chloride being formed. There is a certain amount of danger in its use, as it is an unstable body and gives off chlorine on keeping. If this chlorine comes into contact with hyposulphite of soda free hydrochloric acid is evolved and hydrochloric acid in contact with hyposulphite of soda acts upon it with deposition of free sulphur, which will be deposited in the pores of the paper and will probably combine with the silver.

ZINC, PRESENCE OF, IN COMMERCIAL MAGNESIUM.—M. Bolas has examined five samples of commercial magnesium and in one found as much as 10 per cent. of zinc present. If photographers want a light that does not go out too quickly this admixture is rather a benefit than otherwise.

ZINCOGRAPHY.—A photo-mechanical printing process—or rather processes, for there are a number of them—in which the image is pressed upon a zinc plate by means of a greasy ink, and an etching fluid being applied which eats away the ground work, leaving the image in relief, so that it can be printed like ordinary type.

ZINC ETCHING.—A late improvement in this line, by which the image after having been transferred to the zinc in the ordinary way is etched by passing an electric current through the dilute acid in which the plate is immersed, one terminal being connected with the plate and the other with the acid. The result is a very even and rapid etching of the unprotected portions of the plate, the back of which must of course be covered with asphaltum.

ZINC ETCHING, POINTS IN.—The zinc plate must be thoroughly clean, well polished and quite free from scratches. The graining bath must not be too

strong, or a decided "tooth" will be given which will prevent a good print being obtained; the exposure to light should be made when possible in direct sunlight. The albumen solution must be well filtered and the whirler used to insure an even film. The glue roller used in taking up after exposure must be smooth and in good condition. The ink must be well mixed with turpentine, and great care taken not to have too thick a coating of ink, else the image will smear and the work must be done again. The etching ink must feed well, without dragging, and the grease run at a low temperature. The resin used to dust the ink line must be in a very fine powder, so as to give a close resist to the acid. Do not try etching at all until a suitable etching tray is provided, a tray less than 18 x 15 x 9 inches being of no use. A good hot plate, a good nap roller and a good smooth glazed roller are absolutely necessary.

ZIRCONIUM.—Zr. = 90. This is a tetrad metal, intermediate in many of its properties between aluminum and silicon. Its oxide, zirconia, was first obtained by Kluperth, in 1789, from zircon, which is a silicate of zirconium. It is, like silicon, capable of existing in three different states, amorphous, crystalline and graphuloidal. Zirconium is but little attacked by the ordinary acids, but hydrofluoric acid dissolves it readily, with evolution of hydrogen.

ZIRCONIUM OXIDE Zr. O₂ = 122.—**ZIRCONIA.**—A hard, white powder resembling silica compressed into cylinders; has been recommended for use in the lime light instead of lime. It is, however, extremely difficult to obtain pure. It is a non-conductor of heat, so that before the mixed gases it gives a bright white spot of light not more than a quarter of an inch in diameter.

ZOOLOGICAL STUDIES.—Herr Ottoman Anschutz is to be congratulated on the success of his efforts in the special study of animal photography. But to us there is one great objection to all the subjects from this source which we have seen, and that is the painted in or artificial backgrounds which he treats us with. We have seen far superior efforts from amateur studies made in this country, with the natural surroundings as they existed at the time of exposure.

FINIS.

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Wanted—A good single lens of from 14 to 18 inch focal length. Must be cheap for cash. R. Payne, Lock Box No. 851, Marietta, Ohio.

For Exchange—A 4x5 Eastman Kodak in good condition, also Diamond Ring, to exchange for a better camera. Albert Cesal, 760 W. 18th St., Chicago, Ill.

Wanted—A good Camera and Lens, 4x5. Write description and price. C. C. Hollenbaen, 20 E. Broad St., Columbus, O.

Wanted—20 inch Double Symmetrical Lens, good quality, also 8x10 or 11x14 box. Give description and lowest spot cash price. E. A. Wheatley, Temple Court, New York.

Wanted—A 6½x8½ long focus reversible back camera. State lowest cash price. Alex. Dundas, Box 71, Andover, Mass.

For Sale—A No. 2 folding Hawk-eye, 5x7, without lens or shutter, with six double plate holders, in good condition. Cost \$35.00, including holders. Will sell for \$12.00, c. o. d. Privilege of examination. Geo. H. B. Turner, Ayer, Mass.

For Sale—AMERICAN AMATEUR PHOTOGRAPHER for the years 1893 to 1898 inclusive; *Wilson's Photographic Magazine*, for 1893 to 1898 inclusive; "Photographic Times International Annual" for 1892, '93, '94, '95, '96 (some of these are out of print); Anthony's "International Annual" for 1892, '94, '96; the "British Journal Almanac" for 1893; Wilson's "Mosaics" for 1892, '93, '94; all in good condition, and will be sold very cheap in sets. Also the rare "Optics of Photography and Photographic Lenses," by J. Triall Taylor—in perfect condition. Price, \$2.50. A good chance for some camera club to obtain the very best material for small outlay. Write for prices. Address C. E. Somers, 588 Albany street, Little Falls, N. Y.

For Sale—One 5x7 English compact camera, Eastman's (London) make, both front and back focus, etc. Six double (book) plate-holders, of solid mahogany, numbered with sunken ivory disks; the whole encased in a brown canvas carrying-case, bound with leather, and lined with green baize. Also, a tripod of ash, grooved, brass tipped and pointed, in similar case, the whole forming a handsome outfit, cost, (at discount), \$55; will sell for \$25. Is in good condition. Also a Clark lens (5x8) with brass stops—a good lens. List \$28; will sell for \$18.20. C. E. Somers, 588 Albany street, Little Falls, N. Y.

For Sale—One 4x5 Rochester Optical Co. Premier camera, fitted with Rapid Rectilinear Lens, three plate holders, all in first class condition; outfit cost \$24; will sell for \$14. This lens is particularly good; the outfit can be had on trial for one week on deposit of above amount with the A. A. P. Address T. C. Francis, care AMERICAN AMATEUR PHOTOGRAPHER.

For Sale—A 6½x8½ folding Hawk-Eye without lens, in good condition, with 3 plate-holders. List price \$45; will sell for \$20. Also a 6½x8½ Ross Universal Extra-Rapid Symmetrical lens with Iris diaphragm Shutter. List price \$67.75; will sell for \$40. In perfect condition. Also a 8x10 Beck Autograph lens, list price \$60; will sell for \$33; in perfect condition. Albert A. Burnton, 49 Sixth avenue, New York.

For Sale—One Zeiss W. A. Lens; \$10. One Ross 14 in. focus lens, with Iris diaphragm. New, \$30. R. 705, 34 Washington street, Chicago.

For Sale—One 8x10 Zeiss, wide angle, series 4 lens, little used, \$20; cost \$32. W. J. McBride, 177 La Salle street, Chicago.

Send your photo and 35 cents for 1 dozen miniature photos. Matt or glossy finish. Address Hugh C. Wilson, 20 Field street, Peekskill, N. Y.

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From Pittsburg Salon.

By Amelia Van Buren.

"SHIELD OF ACHILLES."

THE
AMERICAN AMATEUR PHOTOGRAPHER.

Vol. XI.

MARCH, 1899.

No. 3.

Long Focus Lenses.



By R. M. Walker.

"CATHERINE."

THE AMERICAN AMATEUR PHOTOGRAPHER deserves credit for its crusade against the employment of short focus lenses for pictorial purposes, and it must be gratifying to its editors to see that their fight is bearing fruit.

The dictum that "the lens should be at least once and a half the length of the longest way of the plate, and that twice that length is better" has been abundantly proved to be sound, and the fact that Mr. W. E. Partridge, in his article in the February number, seeks to limit it to

the minimum induces me to take a part in the controversy. It is true that Dallmeyer, than whom we need no better authority so far as optics is concerned, has stated that the desirable focal length is the diagonal of the plate, which in plates of the ordinary proportion is less than the minimum insisted on by the A. A. P., but it is also true that Mr. F. M. Sutcliffe, a much better authority when pictorial photography is in question, says that "the lens should never be shorter than twice the base line of the plate," and in a recent number of the *English Amateur Photographer* there appears the most convincing pictorial argument in favor of its being very much longer.



From Pittsburg Salon.

By E. G. Bacon.

"A VENETIAN HIGHWAY."

It occurs in an illustrated article by M. Robert Demachy, the well known Parisian artist, a plea for the employment of the telephoto lens, and includes three half-tone reproductions from three negatives of the same subject, taken respectively by a Zeis anastigmat of about 8 in. focus, a Dallmeyer rapid landscape of 12 in., and a telephoto of at least three times that length, the plates being about 10 x 8; and as to the vastly greater degree of apparent correctness in the perspective of the planes included in the latter there cannot be a doubt.

Why it should and must be so would not be difficult to show, but as "the proof of the pudding is in the eating of it," and one convincing experiment is worth many pages of explanation, whoever will do as I did a few days ago, and have before him two prints such as are before me now, will never again, under ordinary circumstances, employ a lens of short focus; indeed, will always want to use the longest he can.

My camera is a 5 x 7, with a focal capacity of 17 in. and a front adaptor that gives three inches more, with a Goerz double anastigmat of 7 in. focus, and sold to one who did not know any better as a 5 x 7 lens for about \$50. I photographed a characteristically suitable subject, employing an aperture of $f/32$ to secure fairly good definition in the various planes. Then, with a single lens of 18 in. focus, that, unmounted, cost only a little over three dollars, with the same relative aperture and consequently with the same exposure, I photographed the same subject, but from a distance that included all that was in the first exposure; and the difference, or apparent difference, which is just the same thing, was immense. Right and wrong, or truth and falsehood, are hardly more apart.

I don't know much about practical optics, but for a reason best known to themselves opticians increase the price of photographic lenses as they increase in focal length, the first list that I take up quoting one of 6 in. at \$26.50 and a 12 in. at \$50, while the 16 in. required for an $8\frac{1}{2} \times 6\frac{1}{2}$ plate is \$70.



From Pittsburg Salon

"THE LAST GLOW."

By F. T. Aschmann.

A lens of the rectilinear type, of suitable length—and for pictorial purposes I believe there is nothing better—is, for the average amateur a costly affair, but for general landscape the single lens, except for shutter work, is in every respect as good, and the outcome of snapshotting is, as a rule, sufficiently unsatisfactory to make it of little importance how long or short the lens may be.

Those to whom money is an object, then may study economy and at the same time secure satisfactory pictorial results by investing in one or other of the symmetrical, or, better still, the unsymmetrical—that is, in which the front and back lenses are of different focal lengths—type of rectilinear of about the length of the longest way of the plate, and employ it as often as they are seized by the snapping craze; and when they aim at serious work, which can only be done on the stand and with sufficient time to give something like an approach to true values, take to the front or back of the combination, which, if it be a symmetrical will be each about twice its length, or if unsymmetrical, the one, say, once and a half, the other twice and a quarter.



The Pittsburg Salon.

THE heroic determination of the Pittsburg Amateur Photographers' Society to establish a Photographic Salon in the accepted sense of the title, an exhibition of only such photographs as show artistic feeling and sentiment, and give evidence of artistic aim in the selection of the subjects, and at which the only award is the honor of a place on the walls, is justified by the success of the second display, that while we write is being visited daily and nightly by delighted crowds.

As indicated in our last, the society has unique advantages in the use of the magnificent Carnegie Art Galleries, not only as affording ideal exhibition rooms, but in the art flavor by which they are, as it were, saturated, and which permeates through the people of the great city and its surroundings, and has already to a large extent, and will eventually to a much larger, make Pittsburg one of the great art centers of the country.

On the opening night fifteen hundred people were received in the brilliantly lighted and palm decorated galleries, and it would have puzzled the most careful observer to say whether pleasure or surprise was the more prominent expression; pleasure which examining beautiful pictures under peculiarly favorable conditions always gives, or surprise at the great progress that has been and is being made in pictorial photography.



From Pittsburg Salon.

"A MISTY MORNING.",
BY
ANSON B. McVAY.

Each of the three great rooms had its especially interested votaries. That on the east contained 1140 exhibits, the work of the members in competition for local prizes; the general exhibition of 831 exhibits occupied the center, and the 283 Salon pictures were shown in the east room, and on the whole, to splendid advantage. They were fairly entitled to the premiere position they occupy, and fully deserve the attention they are getting.

Of course it goes without saying that the 283 Salon pictures are not equal, that indeed they are far from it. They include the ripe mellow



From Pittsburg Salon.

By Prescott Adamson.

"A WINTER NIGHT."

fruit, the blossom of promise, and even the bud, the first indication of the artistic fruit that is sure to follow; but we are glad to say that they do not include examples of the eccentricities that for a time threatened to make photography ludicrous and now seem to be relegated to deserved obscurity, as not one specimen was sent in.

Where there is so much that is good it would be impossible within the limits of our space to more than mention a few of the most attractive of the exhibits, and it says a good deal for the artistic culture of the Pittsburg people that it is really the best pictures that are each generally surrounded by a group of admirers.

Beginning with the first in the catalogue, Prescott Adamson's "A Winter's Night" meets with universal admiration, and it deserves it, as it is hardly possible to conceive a more striking example of picture making by photography. The impression so beautifully conveyed is that of a moonlight scene, the entrance, spanned by a bridge, to a village with just light enough to reveal the tracks in the snow, the moonlit roofs of some of the houses, and to little more than suggest the trees that line the road.

W. J. Anckorn, of Arbroath, Scotland, shows one example of his characteristic work, "A Good Yarn," 5, and thereby gives ample evi-



Class II, Beginners' Competition.

By Frank Roselle.

"HARVEST TIME."

dence that he is one of the few professional photographers who are in the truest sense of the word amateurs. F. P. Aschman shows much good work, but his "Candling Eggs," 11, although excellent in design and composition, might have had and would have been the better of having some suggestion of the lumination that gives to "candling" its efficiency. "The Last Glow," 6, is a very fine picture. The Baker Art Gallery shows some good work. The aim is high, but, like most of it that we have seen, there is a flavor of the studio about most of it. "Moonlight at Mackinac," 14, is an exception and a fine picture. Ernest G. Boon's "A Venetian Highway," 33, is a fine representation of sky and water, one of the few

Venetian photographs that is out of the beaten path, and out of it to great advantage. Will A. Cadby's "Design for a Panel," 59, is one of the few photographs of the nude that are nudes indeed, with no suggestion of the naked, and is in every respect a charming picture. W. S. Clow has a style of his own and rarely fails to make it attractive. "His "Blind," 62, is a thoughtful and affecting creation, and "Take a Bite," 63, is equally so, but in a very different direction. "A Drove of Sheep," 65, by Archibald Cochrane, brings before us the hills and dales that we love so well and tells its story admirably. It is a thoroughly successful rendering of a difficult subject, mainly because of the charm of atmosphere, so difficult to get, but so effective when got. J. Page Croft's "Welcome Letter," 76, is a fine illustration of the beauty of simplicity. A single figure in a narrow panel, and nothing more; but every line is made to tell. She is living, breathing, thinking, being as different from the lay-figure style of portraiture as night is from day.

George D. Firmin's "Winter," 87, reaches the verge, but without stepping over it, of impressionism as understood by the advanced school; and is unmistakably successful in conveying the desired impression. The leafless branches, the stormy sky, and the snow-clad ground impressed with the footsteps of the weary traveler wending his homeward way, tell the story better than it could be told by the most fluent pen. Emma J. Fitz is well up to her well known mark. We especially like her "In the Doorway," 92, in which by the artistic use of the crudest material she has given us a very fine picture; one of those that once seen is remembered, and returned to again and again. James Gale's "Crypt of Canterbury Cathedral," 100, is one of the too few architectural subjects in the Salon, but it is evidently the work of a master hand, as is that by F. C. Hart, of a very different class of work, "A Middlesex Lane," 110. Edgar G. Lee shows ten pictures, all in his well known style, and all of excellent quality. "The Evening of Life," 139, impressed us most favorably. At the door of a humble cottage an old man sits reading, while his equally aged help-mate stands beside him knitting the ever present stocking. A. B. McVay's "Misty Morning," 167, a peasant woman, preceded by her faithful canine attendant, trudging toward a mist-veiled homestead, possesses all the essentials of a good picture, and is of itself evidence enough to confute the assertions of those who deny photography's claim to be considered a means of producing works of fine art. This is not the work of the camera, but of the mind that controlled it. It is one of the most satisfactory pictures in the Salon. Frank R. Miller's "Cup That Cheers," 174, we have already noticed. He is gradually rising, and will yet take a high position in this class of work, and the same may be said of E. A.

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From Pittsburg Salon.

"A MAID OF ATHENS."
BY
VIRGINIA M. PRALL.



From Pittsburg Salon.

By Geo. T. Power.

"SUNSET ON KANKAKEE."

Mergenthaler. His "Daughter of Simonides," 173, is a fine portrait. C. R. Pancoast is well represented, and his work shows that perfect definition is not inconsistent with truly artistic work. "The Morning Toilet," 192, which adorned our August, 1898, number, attracts much attention. "Sunset on the Kankakee," 200, by Geo. T. Power, is one of the best representations of that much hackneyed subject that we have seen for some time, the suggestion of color being fairly good and the values very far above the average. Virginia M. Prall is a comparatively recent addition to the ranks of picture-makers, but has already climbed high. There is a boldness and beauty in her work that at once demands attention. Drapery is with her a strong point, as will be seen in her "Maid of Athens," 203, which is thoroughly typical. We expect much from her in the future. E. P. Streeper is also on the upward path; his "Quietude," 238, is a fine example of landscape work. Henry Troth's work is well known, and "Cypress Trees," 243, would be hard to beat. It is another striking example of the beauty of simplicity. The "Shield of Achilles," 248, by Amelia Van Buren, is a noble picture, in which every line is made to tell, and not one line but what would be missed. She has been peculiarly fortunate in her model, and knew thoroughly how to employ her.

Mathilde Weil's work is well known and highly appreciated on both sides of the Atlantic, although, curiously enough, in a recent British exhibition she wished to be classed with the professional photographers. The eight pictures here prove beyond all doubt that she is quite able to hold her own with even the most noted of the amateurs. It will be a good thing for photography when even the higher grade of the profession can compete on anything like even terms with her. Her "Dorothy," 274, which was medalled at the last exhibition of The Royal, in London, is a perfect example of childhood portraiture, and very fine too, in an altogether different style, is "Behind the Arras," 270.

Want of space and not lack of very excellent material compels us to stop with the simple declaration that the second Pittsburg Salon is, from all that we can gather, by far the finest collection of pictures made by photography that has as yet been seen in this country.

THE GENERAL EXHIBITION.

The general exhibition, including 831 frames, occupies the central gallery, and it is safe to say that in the competitions of a dozen years



No. 318.

By W. E. Smith

"THE POND."

ago there is scarcely one of them that would not have been a prize taker; while, in consequence of the higher standard fixed, they were rejected by the Salon judges, many of them would have been admitted and some of them had been admitted into previous salons.

Here, as last year, ten "Special Mention Certificates" were awarded, the awarding of which, especially after they had been reduced to thirty, was a matter of great difficulty. Ultimately they were given, but not without hesitation and a desire to give thirty instead of ten, to "Cradle Love," 390, by A. Clark, North Wales; "Day Returns," 422, by Arthur Allen Dean; "Mother and Child," 529, by Jarret Bros.; "Ohio River Scene," 557, by R. W. Johnston; "Carrying Water," 600, by James B. McClay; "Mignon," 607, by A. E. Mergenthaler; "A Bit of Old England," 619, by Dr. Charles L. Mitchell; "The Cap Sheaf," 628, by C. G. Moore; "Saturday Afternoon," 641, by W. J. Mullins, and "A New England Valley," 677, by C. R. Pancoast.

A number of exhibits were marked "not for competition," including twenty fine specimens of the well known work, life-like portraits, of Messrs. B. L. H. Dabbs and B. L. H. Dabbs, Jr. Those were mostly of prominent Pittsburg people, including a fine portrait of Mr. Dabbs himself, and formed a prominent feature in the exhibition.

THE SPECIAL EXHIBITION.

The special exhibition was confined to the work of the members of the society, and had for its object, as stated in the catalogue, the spurring on and training of the members to the Salon pitch, and an evidence of its success in that direction is to be found in the fact that the "Society Cup," offered for the most artistic picture in the entire exhibition, including of course all three sections, made by an amateur member of the society, was awarded to the Salon picture "A Misty Morning," 167, by Anson Bidwell McVay.

A careful examination of the 1140 exhibits included in the twenty-nine entries shows that what may be called the working members of the society are able fully to hold their own in the amateur field generally, and to help and encourage their, as yet, non-exhibiting fellows to follow their good example. It is probable, however, that in future this section, the local exhibition and competition, will be held at a different time from the Salon and General Exhibition, which will be an advantage, so far at least as tending to in some degree lighten the labors of the secretary and his staff.

The gold medal offered by Mrs. Edith Darlington Ammon was awarded to Miss Isabella Wallace, the silver medal offered by W. S.



Class II., Beginners Competition.

**"AMONG THE PINES."
BY
FRANK ROSELLE.**

Bell, to James L. Nix, and the rest of the prizes and diplomas to Messrs. John M. Anderson, F. L. Aschman, W. J. Burke, W. S. Clow, Norman C. Davis, F. E. Gaither, James L. Nix and Frederick S. Steadman.

Just as this goes to the printer we have been informed that up to the evening of Saturday, the 18th, the galleries had been visited by 18,000 people, and that on Sunday between the hours of two and six the pictures were visited by fully 10,000.*

Our Beginners' Competition.

WE regret to say that our Beginners' Competition of 1898-9 has not been so satisfactory as that of the previous year; indeed, as will be seen from the following report of the judges, it has been very unsatisfactory, and that not so much in respect to the number of entries as to the quality of the prints submitted.

The report is as follows:

We have examined the entire lot of prints sent to the Beginners' Competition and do not recommend an award to be given to any of the competitors. The contest cannot compare with that of last year, the only promise shown being in those marked 55, figure subjects, and 17 and 10 in landscape. We, therefore, believe that it should be considered "No Contest"—"A Draw."

(Signed)

W. M. MURRAY,
ALFRED STIEGLITZ.

This is disappointing, but easily accounted for, and the competition will not have been in vain if the present competitors and those who are likely to compete in the future will take to heart the one great lesson that it teaches.

But before touching on that lesson we desire to say that notwithstanding the unfavorable report of the judges, we are anxious to encourage those in whose work promise is recognized, and in which there is evidence of a desire to advance. We have carefully examined the whole of the twenty-two entries in class first and the fifty-five in class second, and with the consent of the publishers, decided to award the first prize in class first, figure studies, to the set marked 55, by Miss Nellie M. C. Knappen, Minneapolis, and the second to

* Strong pressure was brought to bear on the committee to keep the exhibition open for another week, but as the galleries were required for another purpose it had to be closed on the evening of Wednesday, the 22nd, by which time 38,000 people had passed the turnstile, and pictures to the amount of \$275 had been sold, although less than a third of the exhibits were priced as being for sale.

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From Pittsburg Salon.

"BEHIND THE ARRAS."
BY
MATHILDE WEIL.

John Baker, as an acknowledgment of his having reached a considerable degree of success, and an encouragement to persevere in what is practically a new departure, the production of stereoscopic slides of natural history objects; the first prize in the second class, landscapes, to No. 17 by Frank Roselle, and the second to No. 10, by Frederick L. Smith, both of Philadelphia.

Turning to the lesson taught by this competition, it may be summed up in a sentence: *Beware of the abuse of the hand camera*, a lesson that we have continued to teach ever since its introduction. The hand camera in the hands of an experienced photographer who



By Chas. W. Stevens.

"ON CAPE ANN, MASS."

knows its limitations and capabilities is an invaluable addition to his apparatus, but employed by one who has not that knowledge it is simply a means of wasting plates, paper and material; and when that individual is a beginner it has on him or her a positively demoralizing effect, warping their judgment to such an extent that they see no difference between the "soot and whitewash," the result of an exposure of a fraction of a second on a subject that would have required ten or twenty times as long, and a picture in which the values are as nearly as possible true; and inducing them to dignify such wretched productions with the name of photograph, and not only to show them to their friends, but also to enter them in competition with stand camera work.

We do not say that all or nearly all of the competition prints were

of this wretched description, but of the seventy-seven entries twenty-seven were so hopelessly under-exposed as to be unworthy of notice.

But although discouraged we are not defeated or cast down. We shall continue our crusade against beginning with the hand camera, and by and bye arrange for another Beginners' Competition, and although no limit shall be set to the kind of camera employed, we may, with the confidence of a true prophet, tell possible competitors that if their only knowledge has been acquired through the use of the hand camera they need not enter the lists, as they cannot have the ghost of a chance. Better a thousand times to begin with a stand camera and even the cheapest of cheap lenses, than with the best hand camera on the market, and he that does so may rest assured that through the former he will learn how to use and appreciate the latter, but that through the latter he could never learn how best to employ the former.

Since writing the above two sets of prints have been received from U. C. Wanner, too late, of course, for competition, but sufficiently good to deserve honorable mention. For his encouragement we may say that the values, the most difficult quality to secure by photography, are in "In Nature's Garden" better than in almost any of the competition prints; but why make the pretty children stare at the camera, and why arrange them and their arms full of wild flowers exactly alike, instead of contrasting them? There is evidence in this print, and in some of the others, of good photography, but there is also evidence of want of careful thinking out, and pictures are not made without much thought.

A Simple Exposure Meter.

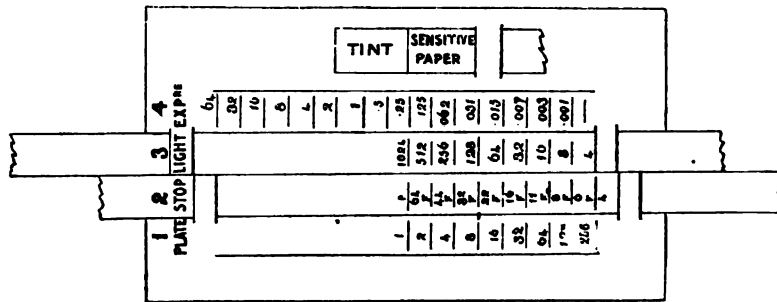
BY J. MCINTOSH.

THE simplest form of exposure meter, and one which it is well within the power of any amateur to make, is that in which three or four slips of paper or card are arranged side by side, each bearing numbers for the different factors which affect exposure, such as the speed of the plate, the size of aperture, and value of the light. These are made to move past each other as in a slide rule, so that all the factors may be brought into position, when the required exposure will be found in the last column.

It is upon this principle that most of the meters in the market are

constructed, the factors being either abstracted from the various tables that have been published, or calculated from experiments made by the inventors. The form described below is a combination of actinometer and exposure meter.

It consists of an oblong card with a shallow box at the back to contain a supply of sensitive paper. Specially prepared papers are used in commercial actinometers, but some slips of ordinary P. O. P. are more easily obtained. A trial piece of the paper should be exposed to bright light in the middle of the day for, say, two minutes, and a tint painted on the card by the side of the slot to match the color as nearly as possible. This is for future guidance. It



should be borne in mind that the light at twelve o'clock noon on a June day is about four times as powerful as it is at noon this time of the year. In the sketch it will be observed that the first column is headed "Plate"; the figures indicate the speed of the plate in use as obtained by the Hurter and Driffeld method. The speeds of all the plates in the market would be out of place here, but the following will be found to be approximately correct: Ilford rapid 60, Edwards's snap shot 80, Barnet ordinary 40, Imperial ordinary 30.

It will be noted that the figures are at equal distances apart, and each successive number is twice the value of that above it. Intermediate numbers can be fitted in if desired. The second column is headed "Stops," and represents the aperture values. These are at the same distances apart as the figures in the first column. The third column is headed light; the figures are doubled each time, and are quite arbitrary. Those given will probably be found useful, but should be tested and altered, if necessary, to suit the sensitive paper in use in the meter. A test will be suggested later on, but whatever figures are adopted, those at equal distances apart should be double the value of the preceding. The fourth column gives the exposure

required. Columns one and four are drawn upon the card. Column two is drawn upon a piece of card, and slides through the slots at the top and bottom of the main card, as shown. Column three is made in a similar way, and also runs through slots.

To use the meter, assume that we are using a plate whose speed is H. and D. 32, that we are using stop $f/16$, and are about to photograph a landscape with strong shadows in the foreground at twelve o'clock noon at the present time of year, also that the paper darkens in 128 seconds. We pull up the column No. 2 till the line running through $f/4$ is level with speed number 32, pull up column No. 3 till the line below the figure four is level with the center of stop $f/16$, when we shall find on column four (opposite 128 on column three) the figure four—four seconds being the exposure required. As this would be about a correct exposure, we may take it that the figures on column three are correct for the paper used. If otherwise, the figures must be rewritten to suit the paper. The figures below one in column four give the exposure in fractions of a second.

Landscapes with heavy foliage in the foreground require the exposure given on the card, sea and sky about one-tenth, open landscape about a third, portraiture out of doors the exposure as given, and portraiture in a well-lit room about twenty times as much.—*Photography*.

The Contribution Box.

TOLIDOL.

IT is now matter of general knowledge that metol, one of the best of modern developers, has an injurious action on certain people, or on people under certain conditions. I am one of those unfortunates, and two years ago had for several weeks to abandon my favorite hobby and suffer much pain and inconvenience from three diseased fingers.

I was unwilling to return to pyro, as for the practice of my profession clean hands are a *sine qua non*, and as rubber finger stalls are a nuisance and I had not been successful with the other developers I had tried, I was almost at my wit's end when my attention was directed to the then new Tolidol, and after its continuous use for nearly a year, I am fully persuaded that it is the ideal developer.

Its keeping qualities, in solution, are greater than any developer yet introduced, as in conjunction with the usual quantity of a sulphite it re-

mains colorless as water for many weeks; its developing power is greater than any of its competitors, half a grain per ounce being ample for negatives of subjects with strong contrasts and especially for snow scenes; and even with an unusually prolonged development there is not the least tendency to fog. For the development of lantern slides it possesses the great advantage of giving various shades of black and brown, depending on the quality of sulphite employed, and it is pre-eminently adapted to the development of all varieties of paper. Added to all there is the fact that it is an American product, which has some influence with at least

Yours respectfully,

LOUIS PETRIE.

Words from the Watch Tower.

BY WATCHMAN.

WHY will newspaper writers and novelists persist in writing on matters photographic, of which they are generally entirely ignorant, and by so doing only get themselves laughed at? The latest offender in this direction that I have come across is the author of a story running in the London *Daily Mail*, who hangs a good deal on the fact (?) that one of his characters managed surreptitiously to copy, by a camera concealed in his hat, an important document that he was permitted to examine. Here is the description of the camera: "It was just an ordinary top hat. In the center of the crown was a small hole, apparently a ventilator, but in reality the small right-angle lens of an instantaneous camera, every wheel and screw of which he had made with his own hands."

* * *

According to Mr. Alfred Watkins, British, or at least English, plate makers, have something to learn in the way of packing plates. They, or apparently most of them, send out each box of a dozen in a wrapper on which is pasted or printed the only indication of the variety of plate or its degree of rapidity, and the wrapper once removed there is no way of recognizing either unless by re-marking on the box, and some of them are covered with black paper on which neither pencil or ink can be employed.

How much better the method generally adopted in America, a three-fold box with all necessary information firmly fixed on the top and ends. No wrapper, but instead the cover pasted down, so that it

is only necessary to slip a paper cutter or knife round the edges. They are easily opened, easily closed, and always safely light tight.

* * *

I suppose it may without offence be admitted that we are sometimes just a little too practical; a little inclined to seek too soon to know if "there is money in it," and thereby to sometimes let the first fruits of a good thing that should have been ours fall into other hands.

An example of this not sufficiently far seeing state of mind may be found in connection with Ives' beautiful and in Britain popular kromskop.

At a recent meeting of the London Camera Club, where a very successful exhibition of kromskop lantern pictures, the work of an amateur, was given, Mr. Ward, who has been associated with Mr. Ives in exploiting the three color apparatus and methods, told how he had watched the development of the kromskop in Philadelphia. "The Americans," he said, "did not see the value of the thing. One said Ives had got color photography on the brain, another, it was a pity he did not turn his talents to something more useful, and so on *ad libitum*." Mr. Ward advised Ives to go to England with the well known result; the kromskop method of showing pictures in color is universally admitted to put all others into the shade, and Ives has achieved an enviable popularity.

* * *

According to "Lux," in *The Amateur Photographer*, light is at last to be let in on the nature of the latent image. The stronghold of those who maintain the physical or mechanical theory has always been the alleged non-existence of the supposed sub-bromide, a shelter under which they can no longer take refuge, as Mr. Bothamely has promised to bring to a meeting of one of the English societies "a bottle of it." When he does so it will be in order to parody Burns on the auld and new light.

"An' when the (physical) billies see it,
I think they'll crouch!"

* * *

P. H. Emerson, in a recent article in *The Photographic Times*, says truly that "the amount of a landscape to be included in a picture is far more difficult to determine than the amount of *oxidizer*—the italics are mine—or alkali to be used in the developer"; but what is the

oxidizer and what part does it play? The reducer, the accelerator, and the restrainer I know, but am all at sea as regards an oxidizer in the developer.

* * *

Are we degenerating? Time was when photographic societies frowned on those who attempted to use their meetings for advertising purposes, and refused to allow them to exploit their secret preparations or methods; and when the leaders in experimental photography had the spirit of the true scientist to regard his discoveries as a trust to be freely given to the present in part payment for what he had received from the past.

Howard Farmer has been reviving the old nuktigonian method of developing in daylight by coloring the developing solution with certain aniline dyes, but as there are still a few left who are conservative enough to believe that they can make better negatives by seeing clearly what they are about, he has, for their sake, revived another method, and found, as was found long ago, that a very much larger quantity of very much safer light could be passed through a cell filled with certain coloring matter than through the ordinary ruby glass.

So far so well, and he is deserving of all due credit for patient experimenting; but when, as is reported by *The British Journal of Photography*, at the meeting of the London and Provincial Photographic Association, before which the paper was read and illustrated, he refused to divulge the nature of the color-filter solution, he stands on a very different pedestal. Let us hope that the reporter was mistaken. I have too high an opinion of Mr. Farmer to willingly believe that he could have a photographic secret, or that having it he should seek to exploit it at a meeting of a photographic society.

* * *

Artists sometimes sneer at the so-called "canons of art," or rules of composition and light and shade, but I have always held that when the sneerers succeeded in painting anything that was really good those canons or rules were to be found in it without much seeking. One likes to see his views corroborated by those who are entitled to speak. Here is what H. P. Robinson has to say about them: "There are so-called rules of art, that have more or less governed all art for centuries, that a critic should recognize as having been felt by the photographer, but not conspicuously thrust forward. Or, indeed, he may be praised for grandly disregarding them, if he is strong enough, a case I have not met with yet, except in words."

Notes.

VELOX IN BRITAIN.—It is gratifying to know that our brethren across the water are willing to admit that "they do *something* better in America." According to *The British Journal*, the introduction in Britain of Velox papers by the energetic Nepera Chemical Co. has brought about a small revolution in photographic printing methods among both professional and amateur photographers, as a result of the fact that its advantages in action are so great and its results so fine.

SOFTENING PROCESS PRINTS.—Herr E. Rothman has patented in Germany a method of softening process prints as to almost obliterate the screen ruling and give to them the effect of collotypes. It is simply the application of friction, rubbing over the surface with the ball of the thumb, a pad of flannel or anything suitable, before the ink is quite dry, but dry enough not to smear. We have tried it and are satisfied that if done when the ink is in the right state the prints may be very much improved.

HOLDING THE MIRROR UP.—Monsieur R. de la Sizeranne, one of the best known and most popular art critics in France, in his recently published "*La Photographie est-elle un art?*" tells some truths that should be taken to heart by every photographer. As a reason why photography as a means of picture making has not got the recognition that it deserves, he says that much has been put down to the discredit of photography, but not enough to that of the photographer. He proceeds to show in detail how exaggeration of perspective, false translation of color, white skies, sunlight more nearly resembling snow, indiscreet exactness of detail, hardness and monotony of execution, and a lamentable perfection in mechanically produced prints, are due to the want of cultivation in the photographer himself. The reproaches have been justly merited, but the fault has lain in those to whom these very mistakes have hitherto been the qualities to aim at. We have, indeed, heard a great deal of spherical aberration, but how about the aberration of the photographic operator? It is true that certain lenses distort. Why, in the name of goodness, employ them? Why endeavor to include an impossible angle in a landscape, or a thousand other errors? Simply because they lie with the worker himself. Give such a man a pencil and paper and he will show no better knowledge. As to the question whether to suppress such defects suffices to raise photography to the dignity of art, it must be answered no. Personal intervention is needed—not limited to using

a little more or less of this or that chemical, or the employment of smooth or rough paper, but evidence of personal *vision* and the faculty of imparting it to the observer of the picture.

RECOGNITION.—The Birmingham Royal Society of Artists has given in a thoroughly practical way its opinion that photography has fully justified its claim to be considered a fine art. By its charter or articles of association it is prohibited from giving the use of its rooms to any society not clearly connected with art, and yet this year, for the first time, the Photographic Society is permitted to hold its exhibition in them.

THE CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS is another association that has been equally, or indeed more highly, favored by the artists of the brush and chisel. The authorities of the noble Art Institute not only permit the Photographic Society to hold its exhibitions under its roof, but there also its meetings are held, its instruction and demonstrations given, and its dark room work carried on. With such facilities, and considering the number of amateurs in Chicago, which, according to the *Times-Herald*, which recently devoted a whole page of one of its Sunday editions to it, is about 80,000, the Chicago Society ought to be in the van.

A NEW FIRM.—Mr. John A. Tennant, for some years past associate editor of *Wilson's Photographic Magazine*, New York, has resigned that post and formed a partnership with Mr. W. E. Ward, one of the founders of the *Photogram*, of London.

Messrs. Tennant & Ward are located at 289 Fourth avenue, New York, and will in a few weeks begin the publication of a monthly photographic magazine, *Photo-Miniature*, which is, we learn, planned along new lines, and will not clash with the existing photographic journals. The new firm will make a specialty of dealing at wholesale and retail in American and foreign photographic books, and will also have the American agency for a London firm of general publishers.

The book-list issued by Messrs. Tennant & Ward may be had on application at the above address.

"WILSON'S PHOTOGRAPHIC MAGAZINE."—We understand that in consequence of the retirement of Mr. Tennant from the associate editorship, and to enable Dr. Wilson to give his whole attention to the magazine and *Mosaics*, the exclusive selling agency, both wholesale and retail, of his large collection of excellent books on photography, or connected therewith, has been transferred to Tennant & Ward, as noticed above, at 289 Fourth avenue; and that more convenient

accommodation for the publishing of *Wilson's Magazine* has been found under the same roof.

PATIENCE AND PORTRAITURE.—The fact that in the higher phase of photographic portraiture the amateur has got far ahead of the professional need not be surprising, because while the latter has to please a not always and not highly cultured *clientele*, and, at anything like the average prices of the present day at least, cannot afford to spend the time, in many cases necessary, to do justice to his sitter and himself; the former has only to please himself and may devote all the time that may be required for even the most difficult of subjects. As an example of patient perseverance in the determination to get just the desired effect we may cite Baron von Meyer-Watson, who, as shown by a recent discussion at the London Camera Club, sometimes spent five hours in the club studio over one subject.

SMOKELESS FLASHLIGHT POWDER.—Prof. Lainer, as the result of many experiments, finds that the best oxidizer to mix with magnesium powder for a flashlight is ammonium nitrate. The best proportions he finds to be two parts of magnesium to one of that salt, and he claims that its actinism is greater than any other proportions, or than with any other oxidizer, and that it is practically "smokeless."

The only objection to ammonium nitrate is its hygroscopic nature, its tendency to absorb water. It should be dried by fusion, reduced to very fine powder, and kept in a well corked bottle, the cork of which has been soaked in melted paraffin. The magnesium should also be in fine powder, and the two kept separate until about to be used, when they should be intimately mixed, Prof. Lainer says with a feather on a sheet of paper; but a wooden spatula or ivory paper knife is preferable.

A NEW DRY PLATE FIRM.—We understand that Messrs. Von Lengerke & Detmold have purchased the well known Wuestner dry plate factory and mean to put into it the necessary capital and ability to make it one of the largest dry plate centers in the country. We hope shortly to have an opportunity of putting their plates to the test of considerable practical work and shall be able to report as to their quality and speed, especially the latter, which is growing more and more important every day.

One of the most difficult things to learn in painting is what to leave out, how to keep things simple; and the same applies, only much more, to photography. —GERTRUDE KASEBIER.

Women and Photography.

(Extracted from an address before the Mobile, Ala. Art League, by Richard Hines Jr.)

THERE is no more suitable work for woman than photography, whether she takes it up with a view of making it a profession, or simply as a delightful pastime to give pleasure to herself and others. She is by nature peculiarly fitted for the work, and photography is becoming more and more recognized as a field of endeavor peculiarly suited to women. There is scarcely a woman who has not some inborn artistic feeling, latent though it may be till brought out by study and training. Nevertheless it is there, and its presence in greater or less degree is promise of success in photography. Cleanliness and patience are two of the cardinal virtues necessary to the successful pursuit of photography. The first seems to be a God-given attribute to most women, while if they have not the latter in sufficient amount, it is a virtue that can be cultivated. The light, delicate touch of a woman, the eye for light and shade, together with their artistic perception, render them peculiarly fitted to succeed in this work.

Success, however, is not to be attained by simply "pushing the button" and leaving to others "to do the rest." That is one of the fallacies of photography which is responsible for so much bad work and so many dissatisfied amateurs. There is no royal road to success in photography, any more than there is in any other branch of human effort. Success is only attained by careful, painstaking manipulation, together with hard study.

It was not my purpose, however, to point out to you how to become photographers, but rather to lay before you what women have done and are doing in photography. I have no doubt that the foremost woman in the ranks of photography to-day is

MRS. CATHARINE WEED WARD.

of London, England. Though now the wife of an Englishman, she is an American by birth. She is the daughter of Hon. William Barnes, of New York, and Emily P. Weed, his wife, who was the daughter of Thurlow Weed, well known in his day in the newspaper life of New York. Mrs. Ward was the first to respond to my request, and has sent me a mass of information about herself, from which I have extracted such as I thought you would find interesting. As a child she "wanted to learn to do some one thing." She was also inspired with the desire to earn her own living, and with the brave resolve to gain equal opportunities with her brothers. "I could not," she says, "see why my brothers should have education, public life, opportunity, any more than myself." She was fond of books

and was a close student, and, while her parents were greatly interested in education, socially in those days Miss Barnes' desire to make her own living was regarded as a mild sort of lunacy. She cared very little what society people might think, but quietly made her own resolves. She entered Vassar College, but pursued her studies with such eagerness that her health broke down and she was forced to leave before she had gone more than half way. Her desire for self-support continually asserted itself, and she made an effort to earn something by painting. Family reasons prevented her from going out to make a position for herself in the world, and her mother's health requiring her constant care, she gave twelve years of her life to that mother, and there is no doubt that she is now reaping the reward of that filial devotion. As Miss Barnes, she took up photography in 1886, the suggestion that she could make it her specialty having first come from her mother. Success was not slow to come to her, for she had prepared herself by long years of study. Her talents were more and more recognized. Her first studio was an attic papered with the rules of the art of which she has since become a mistress, and her dark room was a bathroom. She worked patiently and perseveringly and finally joined the society of New York Amateur Photographers, where she read so many practical papers that invitations came pouring in upon her from other clubs to give them the benefit of her experience. She is the first woman these societies had the good sense to acknowledge, and she proved, as so many have done, that it is the first step which counts.

She was one of the editors of *THE AMERICAN AMATEUR PHOTOGRAPHER* for a number of years, resigning that position in 1894, and is now a member of many of the most exclusive photographic societies of America and Great Britain. She read a paper on "Amateur Photography" at the World's Fair, Chicago, and was a member of the liberal arts board of judges, being the only woman representing photography there.

Mrs. Ward is not alone interested in photography, but in literature as well, and is said to be a very successful lecturer.

In her letter to me she says: "Before my marriage brought me to England I did considerable figure work, and perhaps that would interest your audience better than views. We were in America last winter to visit my family and to lecture on Shakespeare with my lantern slides. We plan to be there again next year with a similar Dickens lecture."

MISS EMMA JUSTINE FARNSWORTH,

of Albany, N. Y., is another woman who has taken high position in the ranks of women photographers. Her exquisite work is well known in the

East, and she has been medalled almost times without number. I regret that Miss Farnsworth has sent me nothing of her personality. She says that to make a success of photography one should have a keen artistic temperament and endless patience, for, like any other branch of art, photography requires close application and the road is long. Relative to how she happened to become interested in photography, Miss Farnsworth writes:

"A camera and outfit was given me for a Christmas present. I did not want it, but out of compliment to the donor, when summer came I tried to make a picture, and after various attempts (following directions in the books) to get a picture, and being utterly unsuccessful, I became interested. It was weeks before I got anything, and then the lens was in the wrong way, and the plates were lightstruck in the dark room, imperfect, etc.

"Stopping at a country house with a girl who was fond of dressing up started me on the picture-making side of photography; and, some prizes being offered, I thought I would try to see if I could not do one thing well, instead of dabbling in a variety. So I tried to make a picture for a prize and succeeded. Since then I have taken between twenty-five and thirty prizes—medals and things. Medalled in England, Canada, France, Italy, Germany, India and America, but I find it such very hard work that I rarely take a picture now.

"It requires very tempting conditions, because, having been through so many failures, the feeling that one little thing may be wrong at that one second which will result in throwing away all one's work and time and strength, makes the posing and taking of a picture a tremendous nervous strain.

"My work is generally in the open air, with having to go miles sometimes for the proper backgrounds, wind, time of day and sun—all to be considered—and the right model."

MISS ZAIDA BEN YUSUF

is an English girl, transplanted to America—quite the reverse of the usual procedure—who has succeeded in photography. She conducts a studio on Fifth avenue, New York City. Here is her story of her work in photography. In a letter written last May, she says:

"I took up the camera at first for amusement, but only for a short time, as I was about to go abroad. While away, strange to say, I did not have the 'Kodak craze' at all, as I made no views on my trip; but I showed one or two of my very limited number of prints to Mr. George Davison, of London, and he at once advised me to go ahead

and make more, as he considered what I had done indicated the spirit of the new school of photography.

"Shortly after my return from Europe I arranged my studio and started to work seriously, so that my actual work only dates back a year; but I think the result is not unsatisfactory for that length of time. As I began to work, almost from the first, professionally, the greater part of what I make is portraits; and I find that the indications are that the better class of people are quite ready for a higher and broader quality of photographic portrait than most professionals will admit.

"Before I had been at work three months *The Century* gave me a commission for a portrait of a celebrated personage. I felt it to be a very encouraging sign, as we have all come to consider that recognition from *The Century* is a very desirable thing.

"I have only exhibited my work at places where there was no question of competition, so far. That is, at the Dudley Gallery Salon, the special exhibition of the Vienna Camera Club, and two pictures among the loan collection of the recent Kodak exhibition." Of herself, personally, Miss Ben Yusuf adds: "About myself there is very little that would be of interest, aside from my photographic work. I was born and educated in England, and came over here with my family several years ago."

Miss Yusuf is a young woman, and while she has very frankly given me her age, I am not inclined to disclose it, regarding it in the nature of a confidential communication, as an evidence of good faith, and not for publication, as the editor says. I can say, from magazine pictures which I have seen of her, that she has a very bright and intelligent face. I also note in recent issues of *The Ladies' Home Journal* that she can create "a love of a bonnet"—that portion of personal decoration dear to every feminine heart—as well as she can make an artistic picture.

MISS SARAH J. EDDY,

of Providence, R. I., is another woman who has achieved success behind the camera. She very modestly writes that she prefers not to give a sketch of herself or of her career in photography. She has very kindly sent me two reproductions from her photographs, and I judge from what little I have been able to find out about her work and from the two specimens which she has sent me, that she is a lover of animals, and that through her camera and in other ways she has sought to inculcate this love in others. She is engaged in humane

work, and has recently compiled a little book of songs for schools and Bands of Mercy.

MISS FLORIDE GREEN.

I now come to consider a worker in whom all Mobilians should feel a special interest. She is Miss Floride Green, of New York. Special interest centers in Miss Green because she is an Alabamian. She was born at Eutaw, and is a niece of Mr. Andrew Pickens, of this city. Early in life Miss Green removed with her parents to California, and it was there that she perfected herself in photography. She says: "Some years ago, while on a visit to the South, a camera was sent to me that I might photograph my old home in Eutaw and the scenes of my childish recollections. I did not then know how to set up a camera (and this was no hand box), but enthusiasm mastered all difficulties, and I was so successful that on my return to California I joined the camera club in San Francisco and began regularly to study and experiment. The plates of my Alabama pictures are still in California, or it would give me great pleasure to send you some of the prints of 'The Shell Road' and Mobile Bay. Now I have really no time for landscape work, devoting myself entirely to portraiture and to copying paintings.

"Most of my pictures of children are taken in their own homes, for I find them so much more at their ease, and by knowing the situation of the room in which I am going to take the child I can decide on the best hour for the appointment, and in that way manage to have the best light possible.

"I have always found photographers, both professional and amateurs, most enthusiastic and helpful, and to the interchange of ideas while a member of the California Camera Club I feel I owe much of my knowledge of how to handle my chemicals."

Of her pictures Miss Green says that she believes in very little retouching beyond softening down the exaggerations of the camera, endeavoring to preserve as many of the lines as possible.

MISS EMMA J. FITZ,

of Boston, has taken high position in the amateur ranks, and her work has been medalled by the Photographic Society of Great Britain. This of itself is high praise—a goal worth striving for by any amateur.

Concerning her art preparation and her work, Miss Fitz says: "I have always been a student of pictures and have had some instructions

in water color work. Still, I have never given any exclusive attention to systematic art study. I consider the most profitable work I have done has been accomplished through the use of a camera. A camera gives an excellent opportunity to test one's knowledge of the rules of composition, and, where knowledge is lacking, to attain it by experience and the training of the eye to the beauties of nature.

"I have great faith in the possibilities of photography as an art, and there is a great field open for women who will go seriously to work. Portraiture appeals to my taste more than any other branch, although I have done little in that direction. If I do much work in the future I shall hope to confine myself to figure and portrait study."

Miss Fitz's experience embraces a period of ten years, though there have been intervals of two or three years in which she has done very little work. Between 1893 and 1895 she exhibited somewhat, and her work was of such a high standard that she received a number of medals. Since that time she has been absorbed in other affairs, and says she has had no time for photographic work excepting during two trips abroad in the summers of 1896 and 1897. On those trips she had some opportunity for making figure studies among the peasants of Switzerland.

MRS. MARY WRIGHT SEWELL,

of Walton, New York, has recently come into notice in amateur ranks through her success in the recent competition of the *New York Ledger*, in which she was awarded first prize for her picture entitled, "He Loves Me, He Loves Me Not." Of herself, Mrs. Sewell says: "My love of art, I am sure, is inborn, as I have always counted each opportunity to see beautiful pictures as one of my greatest delights. Having had superior advantages in music, seventeen years of my life were spent in a purely musical atmosphere as organist of an Episcopal church and teacher of forty pupils, and to excel in this was all I ever expected. Marrying in 1887, I gave up teaching, and in 1895 my husband, quite to my surprise, appeared one day with a Premo camera, saying: "Take all the pictures of baby you can." Result: We have an album of 'Our Baby at Home' worth to us the price of many cameras.

"I find photography a most delightful pastime, and am more and more fascinated with its charms and possibilities, reading everything pertaining to it with eager interest, especially *Wilson's Magazine*, from which I have gleaned much useful knowledge.

"My home life is a busy one, and many, with the little time I

steal for photography, would think it not worth while, months often passing without an opportunity of taking a picture. In fact, I have not seen my camera since last August. Notwithstanding these discouragements and drawbacks, I lose none of my interest in the art and find myself continually making mental pictures, ready for the camera when the opportunity does occur, or discovering some imperfection in those already taken."

In conclusion, Mrs. Sewell shows her interest in what Mobile women are doing in art, and says: "I do, however, wish you and the Art League all success and a Happy New Year."

MRS. CHAS. M'CUTCHEN,

of Plainfield, N. J., has sent the following photographic autobiography, which will be found interesting: "My uneventful career as an amateur photographer dates back some thirteen or fourteen years, to the days when the 'camera fiends,' while somewhat in evidence, were by no means so plentiful as at present."

(To be continued.)

American Interchange Slides.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

The fifty slides from this society are contributed by thirteen members, and as a set they are, as the work of this society has always been, well to the front.

Henry Troth's art is better than his technique, in the sense—and in these notices it is always so used—of true tonality, values, or gradation in the slide. "The Log Bridge" 1, is, in everything essential to a picture most excellent; but the slide, although it includes very much more than the average degree of gradation, contains far too much bare glass, not only in the sky, but all over the beautiful landscape. Equally fine as a picture is the "Ferry," 3, but worse, very much worse as a slide, water, which covers two-thirds of the space, being simply bare glass and the sky not very much better.

W. P. Stokes' slides verge on the flat. A little more contrast would have placed them far up the ladder. "Profile Lake," 6, with more bromide and longer development would have been perfect, and the same may be said of "Lifting the Cloud Veil," 5.

S. A. Latwall's "Sam's Point," 7, is out of the running, as it is simply white and black.

J. H. Burroughs is uneven, but leans largely to the glassy side. In spite of that, however, his "Swans in Lake," 13, is one of the most effective slides in the set. "Zella," 8, is wanting in contrast, although the water is good. "The American Fall," 10, is effective and would have been more so with longer development.

and the same may be said of "Bear River," 11, which but for the far too much bare glass would be a very fine picture.

F. P. Streeper has made rapid progress, both in art and technique, but is yet a little too much afraid of fog. "In Daisy Time," 14, "Bridal Path," 15, and "Quietude," 16, are all fine examples of picture making by photography, and with just a little more exposure, so as to reduce the still too much bare glass, would have been equally good slides. They are well worth working up to, and just a little beyond.

Edmund Sterling's "Atlantic Comber," 17, is flat, but a fine subject. "Sconset Bluff," 18, and "Bluff at Sankaty," 20, are excellent both in subject and technique, and wonderfully effective as a study in light and shade is the "Court-yard of Boston Library," 19.

W. H. Rau is disappointing. He has excellent subjects and can, and therefore should, send into circulation very much better slides. "A Rainy Night, Court of Honor Illuminated," 24, is an exception, and just as it should be, indeed a wonderful slide, but every one of the other seven is simply ruined by the representation of sky and water by bare glass. The "Court of Honor," 23, has a curious effect on the screen, probably caused by its having been photographed from a high point of view. The triumphal arch is the principal feature in the view, and although it, or at least the equestrian figures on the top, reach to the seventh story of an adjacent building, on the screen it conveys the impression of being in size as it is in shape, an ordinary mantelpiece or open fireplace. The sky in this, we may say, is better than in any of the others, being lowered in tone.

Mary Vaux's "At Anchor," No. 30, contrasted with the marine views already noticed, shows well the advantage of a suitable sky. It is a good slide.

W. S. Vaux, in 32 and 33, "On the Gulph Road" and "A Forest Trail," has fine subjects, and has made fairly good slides, that would have been better for less bare glass.

G. and W. S. Vaux's series of glacier slides are all of good quality and fine subjects, with, in most cases, bare glass only where it should be, which is never in the sky.

Prescott Adamson must be awarded the palm, both for effort and the degree of success he has attained. His "Winter Night," No. 48, is one of the most interesting and beautiful slides that we have ever seen. Very fine, also, is "Calling the Cows," No. 47, and almost as good and suggestive is "After the Storm," No. 50. His "Wet Day," No. 41, is very far behind the others, as, in consequence of the excess of bare glass, there is nothing to suggest rain but the umbrellas. Nos. 47, 48 and 50 may well be taken as examples of good slides.

Joseph C. Roop's "East River Bridge," No. 42, is a little flat but a good slide. "Full Moon," No. 49, is better, indeed, excellent, but his other four have the great fault in common, and have it badly, bare glass. It should never be forgotten that however otherwise perfect a landscape slide may be, it will be ruined by a large expanse of bare glass sky.

LANCASTER CAMERA CLUB.

This club shows the work of twelve members, all fairly good slide makers, and some of them ranking very high.

W. D. Zell's "A Few Pointers," No. 1, is a slide of good technique, one of the amusing kind that gives variety to an exhibition. "Pequa Bridge,"

No. 2, is too thin for even an oil light, but more development would have made it a good slide. "The American Fall," No. 4, is from an under exposed negative, a poor slide, and "Niagara Rapids," No. 3, is far too much on the glassy side.

C. A. Sauber's "How Becoming," No. 5, and "Where's That Collar Button," No. 6, are of the same class and have the same fault, although in a less degree.

Phil Schaum's "Ruin of Rifle-Works," No. 7, is of little interest, too confused in composition and not worth photographing. "Face Rock," No. 8, is not much better, although a better slide. "Hoss and Hoss," No. 9, is more attractive and of much better gradation; but "A Woodland Dwelling" has too little foreground, and is simply white and black.

Chas. F. Wilson's "The Swimming Match," is a beautiful slide spoiled by a bare glass sky. "Figure Study," 13, is of the same quality and spoiled by the same cause, and "The Chapel," No. 12, was not worth photographing. It is a poor subject and a white and black slide.

G. R. Rohrer's "Little Tailor's Shop," No. 15, is a good subject, but the slide lacks contrast. The "Shady Turn," No. 14, shows the road as if covered with snow, and "Breakfast in Camp," No. 16, is as false in tone, and has a too glassy sky.

W. A. Heitshu's "The Knob," No. 17, only needed further development to be a fine picture and a fine slide. "After the Freshet," No. 18, is effective because suggestive, but "Indian Hill," No. 20, is too much of the summer snow kind.

Leon R. Miller has a very good slide in "Scissors to Grind," No. 22, correct in values, and just what a slide should be. "Conewago Bridge," No. 21, is a fine subject but a poor slide; poor because of clear glass almost all over, and everywhere where it should not be.

F. A. Dermutto's "The Close of Day," No. 24, is a fine example of the highest quality of slide making and an excellent subject, and "The Susquehanna River," No. 26, is not far behind. It is strange that one who could make these should circulate either 23 or 27, both simply white and black—soot and whitewash.

C. H. Werntz's "The Pasture Gateway," 28, and "A Quiet Nook," No. 29, are excellent in every respect, and well worth working up to; but "A Local Landscape," No. 30, is of the summer snow kind. Compared with the other we are surprised that he should have sent it in.

R. L. Taft does fine work with a tendency to flatness in the slides. "Hog's Back Mountain," No. 31, is an example. The deepest dark is hardly more than a middle-tint. A more suitable development would make this a magnificent slide. The same may be said of Nos. 32, 34 and 35, while in "The Road from the Ferry," No. 36, there is breadth enough, but clear glass instead of middle tints. "Lincoln River Falls," No. 38, is a grand subject, but the trees are as if dusted over with white powder.

Fred L. Franklin is very uneven. "A Quiet Sail," No. 43, is in every respect and from every point of view a splendid slide, quite equal to anything that we have ever seen on the screen; while "Reflections," No. 38, is about as bad as bad can be, or as far below the average as 43 is above it, being bare glass water, bare glass sky, bare glass buildings, and bare glass all over the trees. "A Rustic Table d'Hote," No. 42, is an example of bare glass where it is admissible. In this it is so arranged as to flood the scene with light in a way that makes this an enchanting slide. "Grazing," No. 41, is also of good technique and an effective slide.

W. S. Gleim also works well, and aims at far more than "the usual thing," a mere record of facts. He also realizes the value of "values" and knows how to

secure them, there being not in all his seven slides a patch of bare glass that should not be there. "The Haunt of the Salmon," No. 45, is slightly wanting in breadth, but otherwise excellent. "Across the Meadows," No. 44, is a beautifully effective slide that, on the screen, one loves to linger over, and "The Cot by the Mill," No. 50, is almost as good. "Daybreak," No. 49, is not quite so satisfactory, although a fine slide. The light rising above the skyline seems too local or confined; hardly spreading enough; but, when a slide reaches a point where such suggestions are possible, it is pretty good evidence of the fact that its author is far above the average slide maker. These sets of slides bear evidence of the influence for good of the interchange, from both the artistic and the technical points of view, and, what is extremely gratifying, the improvement is greater in the former than the latter. It is gratifying that it is so, because progress in the artistic is much more difficult than in the technical, and those who succeed in the greater should have little difficulty in succeeding in the lesser.

But they must learn to know a good slide when they see it; must realize the fact that a slide in which water, sky and secondary lights generally are represented by bare glass, or which gives to a sunny landscape the effect of being scattered over with snow, is not fit for exhibition. It should never be forgotten that, no matter how perfect the negative, both in art and technique, if, through fear of fog or from any other cause, the exposure of the diapositive has been too short or the development insufficient to give every degree of gradation necessary for true values, and no slide with more than a trace of bare glass can be true, the place for such is the rubbish heap.

Our Portfolio.

[Prints sent for criticism—*not more than one at a time*—should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*, and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in *THE AMERICAN AMATEUR PHOTOGRAPHER*.]

325. G. COVERT.—"A Rocky Glen" is, from the point of view, neither interesting nor picturesque. There is far too much included; and the lighting has resulted in far too large masses of white. As it is it conveys no particular idea and is in no sense a picture. What is here reduced to about two square inches near the center, photographed on a suitable scale, might be made a good picture.

326. JOHN T. WHITELAW.—"Just a' Fishin'" is of fine photographic technique and a fairly good subject, but the blackness on the tree on the left is a decided blotch. The foreground is also in excess, one inch of which, given to the sky, would have been an improvement. Trimming an inch from the bottom of this print improves it considerably. But for unnatural blackness of the tree we should have been glad to reproduce it.

327. W. C. FREEMAN.—"The Dog" is a photograph of splendid technique, one of the best snap shots that we have seen, but as a portrait it has two serious faults. The noble animal is taken straight on one side so that he seems to be standing on three legs, while a little watching and waiting would have secured a much better

position; and the unpicturesque lines of the sluice, with their frequent repetition, have a tendency to draw the eye from the objective point. A serious fault, too, is the similarity of color between the dog and the background, resulting in a want of contrast, the destruction of distance and a feeling that he is cut out and pasted on. In short, it is an excellent photograph of a very faulty arrangement.

328. W. B. SHAW.—“Where the Old Mill Stood,” as it is represented here, is of no interest. Suggestion rather than depiction is the soul of picture making, but while depiction is more than sufficiently absent, there is also an utter absence of suggestion. It is a very much under-exposed photograph, with nothing to indicate why it should have been photographed.

329. F. M. VAN DERVOORT.—“Lake View Mountain” has been made the most of; but, like photographs of mountains generally, it is disappointing in so far as it fails to give anything like an adequate idea of the scene represented. As a photograph, and it does not aspire to be anything more, it is flat, there not being a single high light, and very little contrast in it.

330. E. R. BOSWORTH.—“Garden Scene” is a good example of what we have called reproduction photography, without the slightest claim to pictorial effect, its one great fault being the false white sky. But for that it would be a technically perfect photograph and nothing more.

331. C. L. HAYS.—“December” is a very satisfactory little picture in which the very best seems to have been made of the subject, although a little longer exposure would have been an improvement.

331. JAMES A. KILTON.—“Christmas Dawn” was not worth photographing, as it is neither picturesque nor in any way interesting. A triangle of gray, a triangle of dark, another triangle of gray, and a lot of black trees with bare branches, under a sky that does not in any way suggest the dawn, conveys no impression whatever. Selection is a feature of the greatest importance. Study your subjects well and never waste a plate on one that does not suggest something or give some impression. The trimming has been correctly done.

332. C. W. NORMAN.—“Exposition Park.” There is no apparent object in photographing this subject. It is not picturesque, not suggestive, and conveys no impression; and it is of no interest as a study in light and shade, as the lights are scattered all over. We should consider a plate wasted on it. See what we said regarding 331; it is equally applicable to you so far as selection is concerned.

333. FRANK E. FOSTER.—“Evening on the Iowa” has only one fault, insufficient exposure. The shades of evening are well suggested and the composition is good, but the lighting is too even and flat. A little illumination on the left would give just what we think it needs. It is in the right direction and far ahead of anything you have hitherto sent. The others are good photographs of the record variety, but the white paper skies and water, and especially the reflections, render them unworthy of notice as pictures.

334. E. W. FREDERICK.—“Resting on the Bridge” could hardly have been worse, and it is a pity, as the three nice girls could have been used to good purpose. The two horizontal lines of the bridge are bad, to let the girls stare at the camera instead of employing them in some other way is bad, the too much vacant foreground is bad, and to put the two white dresses together instead of contrasting them with the black, is also bad. You must study composition and lighting before you can make pictures.

335. B. E. HORTON.—“By the Brookside” is a good subject not well photo-

graphed. The main fault is want of exposure, in consequence of which there is little else than white and black. The figure is also a mistake, standing stiffly and staring at the camera, instead of, as she might have been, assisting to convey some desired impression. To make a picture of such a subject you must give a much longer exposure, and should decide as to the impression you wish to convey, and, to the best of your ability, arrange the available material so as to do it. If you want to introduce figures, always a risky business, see that their dresses are in keeping with the scene.

336. W. H. BLACAR.—"In the Valley" is considerably under exposed, the shadows in the pile of taggots being simply black, and the composition might have been better, sky and landscape forming practically two wedges. A slightly different point of view and much longer exposure would have been better.

337. C. E. SODERSTROM.—"Comfort in Our Sorrows," a woman with a book, presumably the Bible, in her hands, and her eyes directed upwards, is better in design than in execution. The lighting has been full and flat, so as to destroy the expression of the eyes, and the body of the figure has not been sufficiently lighted. The printing in a badly defined oval, with the figure squeezed up to one side, is a fault serious enough to ruin any picture, however otherwise perfect. Try again with a differently arranged light, place the figure nearer the middle and print the whole of the negative, trimming down afterwards as your artistic instinct may suggest.

338. J. D. LONG.—"Ruth" is a beautiful child beautifully photographed; one of those charming representations of childhood that suggest the dancing sunbeam, and in which the infant thought bubbling over with mirth can be read as in a book. The dress was probably arranged to please the mother, but we wish that, after pleasing her, you had taken another picture to please yourself, without the distracting shoulder bulges that so assertingly come into competition with the pretty face. We shall take the liberty of putting it into a circular instead of an oblong form, and have pleasure in reproducing it.

339. HENRY D. ALLISON.—"Eventide," although it does not in the slightest degree suggest what is implied in the title, is a fine subject from a good point of view. A satisfactory foreground, a pier, a canoe, a large sheet of water, distant mountains, a narrow strip of what seems foliage, and a considerable extent of sky, should have afforded material for a good picture; but alas! poor photography has given a worthless rendering. Sky and water, unless where a shadow of the mountain falls, are simply white paper, or what is worse, the mauve-tinted paper on which it is printed. The beauty of such a subject depends entirely on the way in which sky and water are represented, and a white paper rendering is intolerable.

340. S. J. CARPENTER.—"Nearing Home" is faulty as a photograph from serious under exposure, everything not in direct light being simply black. It has the elements of a good picture, the point of view being the seashore, and in the distance a vessel homeward bound, in tow of a tug. A lens of longer focus and larger aperture was required to do justice to the subject.

341. JOSEPHINE W. CLARK.—"A Shady Bit of Woodland" is a finely selected subject utterly ruined by under exposure. It is simply a huge mass of black, scattered all over with specks of white. With four or six times the exposure it might have been a very fine picture.

342. FRED. W. GILL.—"Lakeside" is, as a photograph, under exposed, and as a picture faulty in composition. A sheet of water that would have been better of

a ripple, and a fairly good sky, separated by a wedge of foliage, is not satisfactory from its lopsided appearance. From a different point of view and with a longer exposure this might have been a good picture; but foliage is never so black as you have represented it.

343. E. C. NEWKIRK.—The baby in baby carriage is not a success, neither in design or execution. The carriage should not have been "straight on," and you should have waited till the baby assumed some other position and then given a longer exposure, or had a lens working at a larger aperture; and you should not have so much distracting surroundings. The remedy for the latter is to trim down the present $4\frac{1}{2} \times 3\frac{1}{2}$ print to about $3\frac{1}{4} \times 2\frac{1}{2}$, which is a decided improvement. Don't bother with a dressed up baby; it is rarely successful. Catch it in its toddling about state, and if the light is suitable, and the aperture of your lens large enough, your success is assured.

344. WALTER M. SAMPSON.—"The Pagoda" is just from the right point of view and a good subject, but the exposure has been too short, or, what is the same thing, the lens works at too small an aperture. If you want to be a true amateur photographer you must get a stand camera, so that you may expose under such light as will give the best results, and for such time as will give true tonality or gradation. Except under exposure, the only fault is scattering of the figures; you should have waited till the one on the right had joined the others. When you get a camera better suited for beginners we shall be glad to see examples of your work and give you a helping hand.

345. FRED J. MABLE.—"A Large Family," a child with a number of dolls in a perambulator, is very much under exposed, everything being simply black and white, and the little mother should have been attending to her children instead of staring at the camera. The subject is worth trying again. Give at least twice as long exposure, develop with a solution weak in reducer, and see that the girl is employed with the dolls and not looking stiffly at the camera.

346. L. C. GAILAND.—"On the James River" is a very fine topographical photograph. Fine in selection, lighting and, indeed, every other feature, with one fatal fault, a white or rather mauve paper sky. With suitable clouds printed in, or even the sky as it is toned down, this would have been faultless, but white paper, or, as in this case, tinted paper skies, should no longer be tolerated.

347. G. W. MCCLINTOCK.—"A Woodland Path" is a well selected and well arranged subject, although the tree on the left is a little too close to the margin, repeating that vertical line. A space of half an inch between them would have been better. Then the values are not quite correct. The lightest parts of the path were not nearly so white as they are represented, and the middle distance on the right was not nearly so dark. You are on the right track, however, and with a little more exposure, and perhaps a developing solution weaker in reducer this would have been a really fine picture.

348. EDWIN C. GILLETTE.—"Not Having a Shepherd" has everything essential to a good picture but one, sufficient exposure. The subject and arrangement are good, but trees, sheep and, indeed, everything else, are in silhouette from under exposure, everything being black that is not white. Two or three times as long would have given something like true values, or the true relation of light and shade.

349. LEO C. MOORE.—We can make nothing of the unnamed print. Upright it looks like a great bushy tree with a thick trunk rising out of brush; and, oblong,

may be guessed to be something like a mass of foliage reflected in water, although there is not definition enough to enable one to be sure of anything. It seems to be one of the many thousands of snap shots that are being taken all over the country, and that are simply a waste of good material.

350. L. D. F. CONE.—"Oh! for a Spot in Some Vast Wilderness," etc., has been so much under exposed that but for the white "shirt waist" of the female figure, it might have been thought that night rather than day was chosen for the meeting. The great spreading branches under which they sit, as indeed is everything else, are simply black paper with white points scattered all over; nor is the "vast wilderness" idea well suggested by the composition. Made an upright by cutting off nearly one-half from the right and an inch from the foreground, and given a much longer exposure, it would have been a charming picture.

Our Table.

We have to thank Mr. Frank R. Miller for, in response to our general invitation, sending a portrait of himself, the joint product of himself and wife. It is a successful attempt, in the style of the modern development of portraiture, in which the portrait is made to tell not only what a man is like, but somewhat of what he is. It is a striking proof of the fact that really good work can be done by the amateur in an ordinary room. Were it not that "A gift horse should not be looked in the mouth" we should say that the only fault is the somewhat distracting arrangement of parallel vertical lines formed by the back of the chair in front of the figure.

"AMERICAN JOURNAL OF PHOTOGRAPHY."—We are glad to see the resuscitation of this old friend, and have no doubt that after its long rest it will, like a giant refreshed, show the advantage of independence by being stronger and better than ever.

"THE CAMERA AND DARK ROOM."—Some time ago we noticed the formation in New York of what may be called a junior photographic society, "The New York Society of Amateur Photographers," with apparently an age limit of twenty-two years; or in the words of the prospectus, "of amateur photographers of twenty-two or under." Now we welcome to our table the first number of its organ, *The Camera and Dark Room*, published by the N. Y. S. P. A. Publishing Co. It is hardly fair to criticise closely a first number, but the editor must excuse us for saying that such paragraphs as the following will not make his readers much wiser. It occurs in the leading article, "Photography Analyzed." "It would be boring to explain the chemistry of a plate further than to say that light affects it, or decomposes the silver in the plate, but the image remains latent until brought up by some developing process."

The Camera and Dark Room is neatly got up, fairly well printed and contains several pretty good illustrations, and we hope it will be so managed as to command the success that the bold venture of the young—in both senses—society deserves.

CALENDAR.—Although somewhat late in the day we have to thank Mr. W. C. Sawyer, of Essex Junction, Vt., for a beautifully got up souvenir calendar, one that will be found both ornamental and useful, and especially interesting to those in the locality or having any interest therein. It consists of thirteen 10 x 8 sheets that turn on a pivot, each containing a very good 6 x 4 half-tone engraving of a

scene of local interest, with the calendar matter large enough to be seen at any reasonable distance. It is well worth the fifteen cents, for which it will be sent post free.

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tioga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

THE CAMERA CLUB OF NEW YORK.

At the regular monthly meeting of the club, held on February 14, a revised printed constitution and by-laws was submitted for amendment, action to be taken at the March meeting.

A nominating committee was appointed to prepare a ticket for a board of trustees, and officers for the ensuing year beginning next April. Attention was also called to the print exhibits hung on the walls, by Mr. William J. Cassard and Mrs. Gertrude Kasebier, the latter's work being especially commended by the chairman as showing originality in the accomplishment of art portraiture with ordinary apparatus and simple window lighting.

On Tuesday evening, February 21, Mr. Cornelius Van Brunt gave an interesting lantern slide lecture entitled "The Canadian Rockies." The slides were all beautifully colored.

THE ONEIDA CAMERA CLUB.

The Oneida Camera Club gave an exhibition of lantern slides in the Opera House on Wednesday, February 9, by which they gave pleasure to many friends and realized for the benefit of the club something like fifty dollars.

The slides by the members, mostly of local scenery, excited much interest and applause, but the main part of the exhibition consisted of the set now being lent to various clubs by the New York Camera Club, which, if properly studied, will do much good missionary work. We would strongly advise every club in the country to apply for a loan of the excellent collection.

THE WYANDOTTE CAMERA CLUB.

The Wyandotte Camera Club has been organized in Kansas City, Kan., with every prospect of a successful career. Its inaugural officers are: President, Dr. J. Y. Simpson; vice president, Professor Samuel Enswinger; secretary, Miss Metta Moyer, and treasurer, Miss Nellie Armentrout, from whom we shall be glad to receive reports of such transactions of the club as may be of interest to our readers.

PHOTOGRAPHERS' ASSOCIATION OF OHIO.

Through the courtesy of the secretary, C. S. Bateham, we are favored with the report of the executive of the Professional Photographers' Association of Ohio, which met at Toledo on January 9. The reports of the secretary and treasurer, the latter showing a balance on the right side, were satisfactory.

The 1899 convention will meet at Put-in-Bay, on Lake Erie, on August 30 and 31, and September 1, and a contract has been made with the Hotel Victory Company which gives the association the use of all the accommodation required for convention purposes, including a room with water for demonstrations, and a ball-room and orchestra, and a rate for members of \$2 per day; children under ten, half price.

There will be a salon and exhibition, the former including only photographs

of the highest artistic merit, and for which their authors will receive certificates of honor. In the latter a silver cup, five gold, seven silver and six bronze medals, and numerous diplomas are offered; and although these imply considerable outlay this State association sets an example which the best friends of the National P. A. of A. would like to see it follow, in deciding that "the officers obligate themselves to meet any deficiency that may arise without calling on the dealers to donate."

A list of the prizes, rules, blank forms and all necessary information may be obtained on application to the secretary, 56 East Main street, Norwalk, O., whose closing words we heartily indorse: "Here is a splendid place to bring your family and take a vacation on this, the most beautiful island of the lakes."

MINNEAPOLIS CAMERA CLUB.

Since our last notice this club has shown to crowded houses the Sacramento, San Francisco, Albany and Rutland interchange slides, and the members have had interesting demonstrations of slide making, posing and lighting, etc., and an exhibition of some of the interesting pictures by Miss Gertrude Kasebier, of New York, and exhibitions accompanied by criticisms of their own slides.

Our Prize Slides are still available for use by subscribers and clubs for an evening's entertainment. Express charges only one way have to be paid. The set is now located in Illinois. Applications should be sent to F. C. Beach, 361 Broadway, New York.

Our Artistic Competition Photographs, 8 x 10 in size, on heavy mounts, about forty in number, are available for use of clubs desiring to increase interest in their print exhibition. Address F. C. Beach, 361 Broadway, New York.

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander & Davis), Washington, D. C., from whom copies of the patents may be had.]

J. A. LOPSTEDT, Yonkers, N. Y.

Printing Frame—No. 616,577.

This frame is provided with frictional marginal clamps by means of which the paper may be placed and properly held while the removable back is being clamped in position. The clamps comprise gravity latches which automatically drop out of the way when the spring clamp-bars are depressed, to release the back, and drop into position again when the frame is raised at one end.

J. C. FYFE and V. ODQUIST, Chicago, Ill., assignors to Western Camera Co.

Shutter—No. 616,582.

This device employs a segmental pivoted shutter, a pivoted cam, and a V-shaped spring connecting the cam to the shutter. A pneumatic device is employed to shift the cam and the V-shaped cam spring causes the spring to operate. Means is provided whereby the shutter may be set for time exposures.

Answers to Correspondents.

[Communications for the editors, pictures for criticism, and apparatus and material for examination, should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*

JOHN H. SCOTT.—The marine, 248, is improved by the alteration, but the under exposure is still abundantly evident in the shadow under the boat, the near sides.

of the wavelets, and the distant foliage. The absence of translucency in the water, the *feeling* of water, so obvious here, is due entirely to the blackness of the near side of each wavelet, a fault caused by lack of sufficient exposure. Your method of printing in sky and distant hills is satisfactory, although the latter are not so successful as they will be after you have had experience.

C. W. NORMAN.—Contributions for insertion must be here before the 15th of the preceding month.

L. T. HERMAN.—We have not printed the article to which you refer.

LEO A. MOORE.—The marks, or stains, on the print are evidently due to wrong handling, touching with hypo-soiled fingers or such like.

H. A. DOBSON, M. D.—The plate you mention is not much if at all employed. It is an attempt to imitate in a photographic print what half-tone engravers would be glad to get rid of in their process work. The method you suggest would be useful but the difficulties in carrying it out are so great as to make it impracticable. The present method was adopted after considering all the plans proposed by our readers some two years ago. Our aim is to deal with results which depend not on apparatus, formulae or material, but on the way they are employed.

F. M. VAN DERVOORT.—We cannot give you the desired information regarding the exposure meters referred to, but in an article and illustration on another page you will find what will probably answer your purpose. In a contemporary Watkins claims that it infringes his patent, but gives photographers permission to make the slide rules for their own use. A paper suitable for actinometer purposes may be prepared by soaking ordinary bromide paper for ten minutes in a ten per cent. solution of potassium nitrate and drying.

M. G. WILKINS.—Yes, the speed of shutters, some more than others, varies from time to time, and for accurate work such as yours it is desirable to know exactly what it is when your experiments are being made. There are various methods by which this can be done, but Pickering's Speed Tester, made by the Carter's Ink Company of Boston, is, in our opinion, the most convenient and accurate, and costs, we think, only half a dollar. A description of it will be found on page 366—the August number—of our 1898 volume.

JOHN E. WILLIAMS.—The color to be obtained by the method mentioned depends, as indeed does that by all other methods, largely on the negative and the depth of printing. "Dilute" is an indefinite term, but in this case would be met by one drachm to twenty ounces. Please in future observe the notice at the head of this column.

The quantity of sodium carbonate is unimportant, so long as it is sufficient to neutralize the acid; a "pinch" will be enough, and a drachm would do no harm.

R. W. ROBINSON.—We have not noticed your prints in the "Portfolio," first, because you sent six instead of one, and secondly, because they are utterly unworthy of notice. Such snapping "with a small stop because you were told the smaller the stop the sharper the picture," is simply a waste of material. Lay your hand camera aside till you have learned by the use of the stand camera, something at least of the relation of light and stops.

NELLIE MILLE.—You have not got the red you want in toning bromide paper because the uranium in your formula is in excess. Increase the ferricyanide a little, and carry the toning far enough and you will get it.

S. M. PROUT.—The stains are the result of careless manipulation, probably touching with hypo-moistened fingers. Your dealer is either ignorant or more attentive to his own interest than to yours.

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For Sale—Pony Premo Sr., 4 x 5, in fine condition, with carrying case and 6 double holders. I wish to sell in order to buy a long focus camera. Also "Photo-Americans," "Outings," "Scribners" and others to exchange for "Amateur Photographers" prior to 1897 or for photographic annuals. N. E. Arnold, Grenoble, Pa.

Wanted—A 5 x 7 Folding Box, Pony Premo preferred. William H. Blacen, Bangor, Maine.

To Exchange—A \$65.00 hand made "Climax" 10 gauge, choke bored double barrel Shot Gun for a Rev. Back L. F. Premo with R. R. Lens, (5 x 7); or a Goerz Dbl. Anastigmat Lens, Series III., Nos. 2 or 3. Paul E. Kennedy, Hotchkiss, Delta County, Colo.

For Sale—A Premier 1898, Model A, 5 x 7. Only used five months. In first-class condition; also three plate holders. Cost \$35.00, will sell for \$25.00 cash. Geo. F. Kunz, care of Byrider Bros., Akron, Ohio.

Wanted—A 4 x 5 Camera in good order; must have Rectilinear Lens. Write W. J. Reid, Vassar, Mich.

Wanted—Modern 8 x 10 Camera Box and Tripod, cheap for cash. Give full particulars. Address "W," P. O. Box 1748, New York.

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will divide up. Write for further particulars and prices, which will astonish you. J. B. Barlow, Grand Rapids, Mich.

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Wanted—A good Camera and Lens, 4 x 5. Write description and price. C. C. Hollenbaen, 20 E. Broad St., Columbus, O.

Wanted—20 inch Double Symmetrical Lens, good quality, also 8 x 10 or 11 x 14 box. Give description and lowest spot cash price. E. A. Wheatley, Temple Court, New York.

Wanted—A 6½ x 8½ long focus reversible back camera. State lowest cash price. Alex. Dundas, Box 71, Andover, Mass.

For Sale—A No. 2 folding Hawk-eye, 5x7, without lens or shutter, with six double plate holders, in good condition. Cost \$35.00, including holders. Will sell for \$12.00, c. o. d. Privilege of examination. Geo. H. B. Turner, Ayer, Mass.

For Sale—One Zeiss W. A. Lens; \$10. One Ross 14 in. focus lens, with Iris diaphragm. New, \$30. R. 705, 34 Washington street, Chicago.

For Sale—One 8 x 10 Zeiss, wide angle, series 4 lens, little used, \$20; cost \$32. W. J. McBride, 177 La Salle street, Chicago.

For Sale—One 4x5 Rochester Optical Co. Premier camera, fitted with Rapid Rectilinear Lens, three plate holders, all in first class condition; outfit cost \$24; will sell for \$14. This lens is particularly good; the outfit can be had on trial for one week on deposit of above amount with the A. A. P. Address T. C. Francis, care AMERICAN AMATEUR PHOTOGRAPHER.

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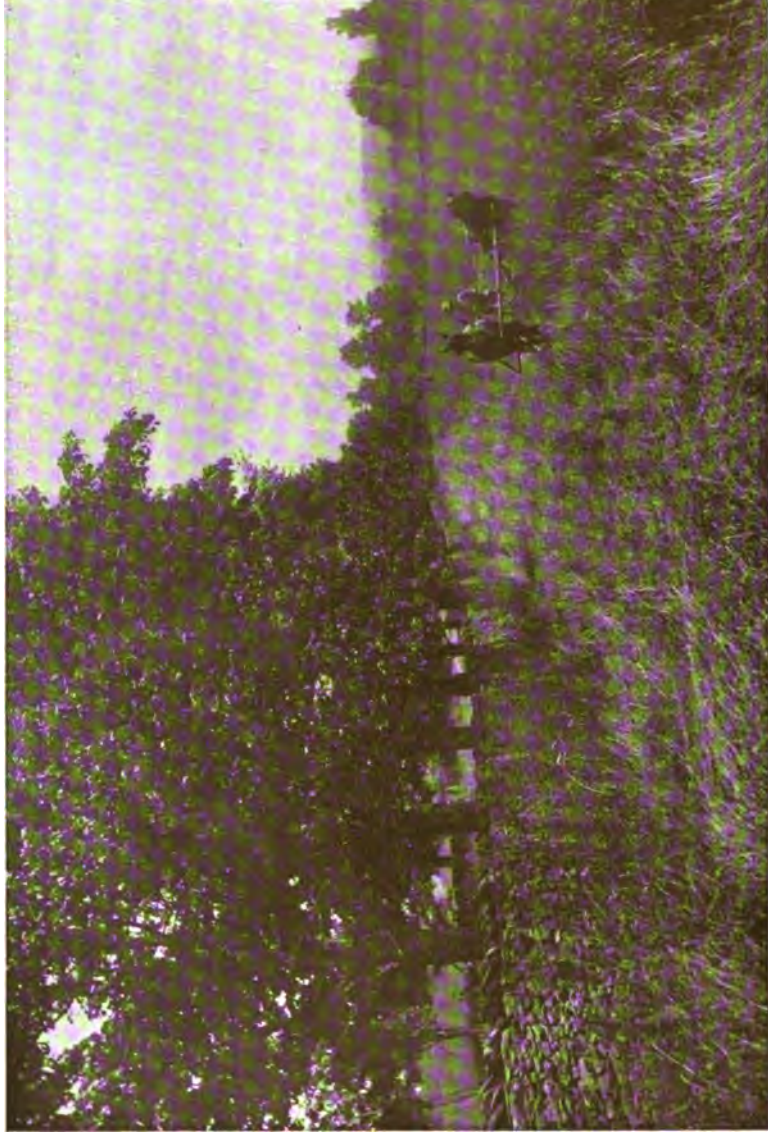
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By Geo. W. Norria.

"MOWING THE MEADOW."

THE AMERICAN AMATEUR PHOTOGRAPHER.

VOL. XI.

APRIL, 1899.

No. 4.

Values.

BY WALTER W. SIMPSON.



No. 230. By Arthur F. Atkinson.

"PANNING OUT."

IF a photographer who is also an artist were asked to examine an average collection of photographs made during the last year or two and to say what is the most important feature that is most generally and most disastrously neglected, he would, or most certainly he should, say "values," in the sense of the proper rendering of the relative intensities of light and shade and luminosities, as reflected from the various objects. The rendering or translating of colors according to their luminosity has always been one of photography's weak points, although orthochromatic plates and color-screens or filters, properly employed, go far to remove the reproach; but it is not that with which I at present mean to deal.

I have before me two photographs of an old abbey from about the same point of view and with lenses including about the same angle, but there their similarity ends. The building stands on a slightly rising ground, has two square towers partly covered with ivy, a few aged trees immediately in front and a stream of rippling water bordered by small willows in the foreground.

I know the scene well. The impression conveyed, even on the brightest day, is that of quiet gray hoary age at absolute rest, and that is exactly the feeling produced by one of the photographs. The gray, but not dull



No. 235.

By N. E. Arnold.

"IN THE MEADOW."

sky is reflected in a slightly lower tone in the water, and the only spot of high light is the froth produced by a little streamlet falling from a ledge of rock. The darker ivy, in consequence of its glistening surface, is lighter than the lighter willows, the shadows of which lead the eye into the picture, and that detail is not inimical to true pictorial effect is amply shown by the fact that in this beautiful picture the weather-worn markings on the old gray walls are faithfully rendered. This is an example of practically correct values. True, there is only

one little spot of highest light, and one, a little larger, the arched entrance to the dark lower regions, of deepest dark, but between the two there is every degree of gradation necessary to produce the desired impression. But this kind of photograph cannot be made by snap-shotting with a hand camera, nor in the only kind of light in which hand camera work should be attempted. It can be done only by the photographer who knows what he wants and who knows also how to arrange light, stop exposure, development and printing, so that they shall all work together for its production.

The other photograph, how different! But for the ivy, the building may have been fresh from the hands of the builder, for all the idea of age that it conveys. One side of each of the square towers is as white as the white paper sky and the equally white water underneath, while the other sides are in midnight gloom, only a little less black than the altogether black of the ivy, the willows and the trees.

It is perhaps an extreme example of the effects of under exposure, but not worse than thousands that are being made every day by those who

have not yet learned that whatever latitude there may be in development, the "to be or not to be" of correct values is practically fixed and forever settled when the exposure is made. The old advice to "expose for the shadows and let the lights take care of themselves" is as sound as ever, although there should be added to it "and develop correctly," which means go slow, take plenty of time to it, and employ solutions weak in the reducing agent; weak enough to leave the lights more or less translucent even where a little forcing has been necessary to give the desired detail in the shadows.

It has been often said, and I think in this magazine, that a negative should show at least five distinct degrees of gradation; light, half-light, middle tint, half-dark, and dark; and that one that does not possess these is not worth printing from.

The five essential points in picture making by photography then, are, first, selection of a suitable subject; second, at the time of exposure to see that the lighting is such as will convey the desired impression; third, to give sufficient exposure to render possible the development of the necessary detail in the shadows; fourth, the adoption of a method of development that will bring out that detail and all required gradation without producing opacity on anything but the highest of high lights, and fifth, the selection of the printing method best suited to the subject and the reproduction, as far as possible, on the print of all the gradations or values that are in the negative.

—◆—
Ambition is a business necessity; conceit, a stumbling-block to success.



No. 238.

By F. S. Thompson.

"THE FOOT BRIDGE."

From the British Side.

BY A CAMERAMAN.

PROFESSIONAL photography may be on the wane with those who cannot keep abreast of the times; who do not recognize that the days of eggshell faces and theatrical posturing are past, and that the general public, those at least who can and will realize the fact that an artist is worthy of an artist's hire, are beginning to want in their portraits something more than a mere likeness. But for those who can put art into photography instead of being content to put "photographic artist" or "art photographer" over their doors, there is still plenty to do, and plenty of encouragement to prepare on a scale larger than ever for the doing of it.

A notable example is to be found in the Messrs. Langfrier, the well known Glasgow photographers, who have just opened in Old Bond street, London, one of the finest and best equipped establishments in Europe, probably in the world. It is a sight worth seeing, to photographers worth going a great distance to see. Of the reception, dressing and other rooms I need say nothing except that they are reached by the, in this country, rather unusual thing, a lift or elevator, and that they are as magnificent as a year's labor, unlimited outlay, and exquisite taste could make them; but the studio is worthy of special notice. In size it is about forty-five by twenty feet, and glazed so as to give a perfect flood of light. At one end is fitted up a stage for theatrical photography, complete even to the "raked" floor; and including proscenium, curtain, footlights, scene clock, etc., with incandescent electric lamps to the extent of 50,000 candle power; sufficient, in combination with daylight, for the artistic lighting and cinematographing of stage plays. I would not, on my next visit, be at all surprised to see a suitable phonograph added to the equipment, and to hear that cylinders and films of all the popular plays were about to be put on the market, so that at a moderate cost one might both see and hear them at his own fireside.

Probably the most interesting occurrence since my last letter was Swinburne's paper before the Society of Arts, on the new electric light, the Nernst lamp; an incandescent light without vacuum, fragile bulb, or more fragile filaments, and what should be of especial interest to lanternists, giving a large amount of light from a small surface. The essential part of the lamp seems simplicity itself. A little rod of the refractory or rare earths, such as thoria, mounted on two platinum wires, and that is all. It costs little at first, little to renew, has a long life, gives a flood of light to which both for volume and color, the present incandescent lamp



"SUNDAY AT HOME."

BY

NELLIE M. C. KNAPPEN.

One of a series of pictures awarded first prize, Class I., AMERICAN AMATEUR PHOTOGRAPHER
Beginners' Print Competition.



From Pittsburg Salon.

By Henry Troth.

"CYPRESS TREES."

cannot hold the candle ; and, according to Mr. Swinburne, is the greatest invention in electric lighting that has been made for years ; an opinion that seems fully endorsed by the galaxy of eminent scientists that were present.

If it be true that imitation is the most sincere flattery, your velox people should feel flattered indeed. Introduced about the time of the Crystal Palace Exhibition, velox paper at once attracted public attention. First by its novelty, a paper so sensitive as to print in a few seconds, and that yet could be developed in dull daylight : and then by the beauty of its results, and the ease and certainty with which they were produced.

The friend of the professional in dull days, and the delight of the amateur just as he was learning to recognize the vulgarity of the glossy print, it rapidly reached a popularity that threatened to oust all other silver papers. But our paper makers, believing that what had been done by others could be done by them, set to work, and now there are quite a number of veloxes, but under other names, in the field ; although, so far as I can learn, they are all, as yet, far behind in the race.

The only fault that has ever been found with velox was the alleged impossibility of getting on it red tones or colors, a most serious fault at a time when, for some subjects at least, red colors are all the rage ; but that it was a mistaken notion was made evident by Mr. Foxlee, who at a recent

meeting of one of our societies showed a number of prints ranging all the way from red to sepia, and promised, at a future meeting to give the formula by which they were developed.

As I have already said, red prints are now all the rage. At a recent meeting of the Photographic Club, Mr. Henry showed how very fine colors may be produced by the following formula :

Water 20 parts.
 Copper sulphate 1 part.
 Ammonium carbonate(about) 8 parts.

A thick precipitate is formed on mixing the ingredients, which redissolves on adding sufficient of the carbonate, leaving a clear solution.

In another vessel are mixed :

Potassium ferricyanide (ten per cent.)..... 25 parts.
 Water 150 parts.

The copper solution is then added to the contents of the second vessel, and a turbid solution results, which will render a fine red color in a short space of time.



"THE GRAZING HERD."

By Geo. W. Norris.

Women and Photography.

(Extracted from an address before the Mobile, Ala., Art League, by Richard Hines, Jr.)

(Continued from page 124.)

“IN its beginning—as in most of the other good things of this life—there was a man in the case, a brother-in-law, who happened at the time to be in the same house and who invested in a camera. He knew nothing about it—I less than nothing; but I immediately became interested. He bought some developer and a small book of instructions, and together we groped about in a dark corner of the butler’s pantry, spoiled some dozens of plates and, incidentally, a large portion of the pantry; sat up half the night with some of our negatives, but out of the chaos once in a while rescued a plate that held out a ray of hope and led us to believe there was something in it, after all, that is, led me; for, after a season or so of varying fortunes, mostly adverse, the brother-in-law renounced photography as a recreation, remarking that it was too much like work, and took to whist and billiards instead. But he lent me the camera that winter for a Florida trip, where I, no longer fettered by masculine interference, had some tolerable luck—enough to make me resolve to invest on my own account.

“My outfit, bought second-hand, was a $4\frac{1}{4} \times 6\frac{1}{2}$ camera of English make, fitted with a French Hermagis lens. The camera box, which was a little clumsy in construction, has long ago given place to one of the Rochester Optical Co., but the lens has never been supplanted by any other. It proved to be a little gem, with a very unusual ‘all-over’ focus, not rapid enough for good instantaneous work, but excellent for portraits and interiors—the special branches which have always claimed my interest. During the years that I have owned and worked with this simple outfit I have seen friends—especially masculine ones—invest hundreds of dollars in cameras of all shapes and sizes—some of them without producing a dozen plates worth keeping, the moral of which is that the measure of success does not lie in the outfit; it must be good, but it need not be costly, and the amateur who is always experimenting with new lenses or plates never, as a rule, learns the mastery of either.

“As with lens, so with plates and developer. I have always been a conservative, believing that when a good thing is found (or one that gives me satisfaction) in sticking to it. For years I have always developed with pyro. Of late, because of its convenience and of the



"IN THE OLD ORCHARD."

BY

FREDERICK L. SMITH.

**One of a series of prints awarded second prize, Class II., AMERICAN AMATEUR PHOTOGRAPHER
Beginners' Print Competition.**



By S. I. Carpenter.

"SUNSET."

fact that one is able to use it and still preserve lady-like hands, I have used rodinal, though I still think that for portrait work no developer gives such soft shadows as pyro.

"Printing has always been my *bete noir*. It takes so much time and so much mechanical dexterity to print well, and a woman is certain to be interrupted by a caller or book agent just at the critical point. For a long time I had my printing done, but that was unsatisfactory. Of late I have had good results with velox paper—not that I think it the best of papers, it has its drawbacks—but because it keeps well, is simple to use and may be manipulated on a rainy day when the book agent and the caller are not abroad.

"My advice to anyone beginning photography would be: Do not waste all your time on 'press the button' photography, and let some one else 'do the rest,' but get a good camera and easy, safe plates and as you have time and opportunity, study it out for yourself.

"If photography is not art it is at least art's handmaid, and you will learn many things about light and shade, grace of pose and artistic effect that were before quite hidden from your eyes, and as the years

go by you will have a record of them that every added one will make more interesting and more precious.

"Especially would I like to urge this, if I might, upon young wives and mothers. I know that they are the busiest of all people and that photography takes time, but after all it is a question of what is most worth while. I call my photography my fancy work, and have never regretted that it took that form rather than crocheted mats and embroidered pillows. They would have been worn out and faded long ago, whereas I have now in my series of negatives a sort of family history running through the years (a seventeen-year-old daughter now, whose first negative dates back to four) from which I can print at any time.

"There are a thousand interesting moments of childhood which a mother sees that a photographer is powerless to catch when a little frightened, dressed up specimen is put down before his great black camera. There is nothing that seems to me quite so worth while as to be able to preserve for one's self and one's children these little every-day pictures of the childhood that goes so quickly; and if the



By Geo. W. Norris.

"AN ALPINE STREAM."

day comes when these memorials are all that is left of some beloved little face and form, how priceless do they become!

"Photography takes time and patience, to be sure, but it is time well spent, and patience that brings its reward."

MISS MATHILDE WEIL,

of Philadelphia, is another woman whose work has been medalled in many places. She is a niece of Mrs. Rachel Heustis, of this city. Of her photographic career she says: "I got my first camera in the winter of 1896-7, as a means of amusement and interest for myself. I practiced on my friends, and my photographs became so much in demand that I did not think it right to compete with professional photographers except on their own terms. Accordingly, two months from the time I started I became a professional. I charged from the beginning the highest prices that obtained in the city, and have always had more work than I could do, refusing many orders unless the people could wait from a month to two months. At present, although I charge for my appointment alone what the highest-priced photographers here charge for a dozen prints, I do not find that the works pays financially, for the reason that I put too much personal work on everything to be able to take in enough orders to cover my expenses. I have one assistant, but she does none of the more important work, and I hope never to become what I call a department store photographer, giving to others my developing, retouching, etc. I do very little retouching, though I work either on the plate or on the print whenever I can make the picture more like the people I see before me. I simply try to apply to photography the methods I learned in drawing and painting. I have been very fortunate at exhibitions, having gained an award of some kind at all to which I have sent. My chief difficulty lies in my working as a professional and not as an amateur, as I rarely can choose my own subjects or modes of working. All my awards but one have been made from my ordinary professional work, and I hope some time to give up this class of photography and work from professional models or from selected subjects, whom I can pose and gown as I wish."

MISS KATHARINE E. M'CLELLAN,

of Saranac Lake, N. Y., who for the past six years has been living in the Adirondacks taking care of an invalid sister, as her sister improved and needed less care and attention, began to find time hanging heavily on her hands. About this time a second-hand camera was placed



From Pittsburg Salon.

"IN THE DOORWAY."

BY

MISS EMMA J. FITZ.

in her possession, and although she knew nothing about the work she struggled through all the trials and tribulations of an amateur. Before long she began to produce such pretty pictures that all her friends wanted them, and she gave them away till her finances would stand it no longer. Then one of the hotel proprietors invited her to exhibit her pictures and placed a room at her disposal, and the exhibition was a success, and she soon found herself fully launched as a professional photographer. She has exhibited in all the large hotels in the Adirondacks. Miss McClellan says that she has always had an artistic bent, but never was able to find any satisfactory field for it until she took up photography. She studied art for a year in Europe, and even tried stained-glass window making in her effort to find her proper niche, but she never enjoyed anything quite so much as she does her camera. Her work has been almost wholly view work, ever aiming to make pictures from the artistic standpoint, but since she has developed so large a business she has taken up other lines also with excellent success. She says: "After a year of varying successes and failures, my father built me a small studio—a one-room affair—which seemed a very paradise, but by another season two more rooms were added, and this season I have just finished a two-story building.



No. 322.

"THAT OLD FAMILIAR TREE."

By S. I. Carpenter.



No. 340.

"NEARING HOME."

By S. I. Carpenter.

My exhibitions last winter in New York and Philadelphia were very successful and largely attended, and if I had been strong enough I should have held a series this winter in the large cities; but I have been working very hard and overtaxed my strength.

"In giving talks or addresses to amateurs I make a point of composition. It is absolutely essential to good photography, and while to the artist form and color are equally important factors, to the photographer form is everything. Color, as such, only appeals to him as gradations of light and shade. That is why so many charming bits, which to the eye make pictures, as photographs are utter failures, because their beauty is due entirely to color effects. First of all then, the form and subject of your picture should be picturesque in outline: it should have balance, symmetry, a foreground, middle distance and distance, each having suitable relation to the other, according to the impression which you wish to convey. There should be one point of interest and one only, and it should be placed somewhat to the left of the middle of your picture. Correct composition will be clear, direct and restful to the eye. Even the untrained eye will feel it without knowing why."

Here at home we have a promising woman amateur in the person of Mrs. Charles S. Shawhan, who, although but a beginner, has shown some artistic feeling, and gives evidence of the possession of those qualities which will bring success. She is enthusiastic and energetic and has the honor of being the founder of the Camera Club. You will find Mrs. Shawhan's photographic story of the "Sick Doll" well conceived and very well executed, considering the very cheap camera with which it was done.

In conclusion, I desire thus publicly to return my thanks to your president for her kind invitation to address you this winter; to the members for their attention and interest, and to the ladies who have so cheerfully responded to my requests and who have aided me in giving to this address whatever success it may merit by their contributions of pictures and experiences.

I now wish to direct your attention to the collection of pictures which have been gathered for your pleasure, and trust that they may give you as much pleasure as their collection and the preparation of this address have given me. Among Miss Weil's collection you will find six prize winners—"Polly," "Marian," "Constance," medalled three times, "Il Penseur," "Rosa Rosarum" and "Our Lady of Sorrows." Some fine specimens of portraiture are to be found in the display of Miss Floride Green, while the landscapes of Miss McClellan and Mrs. Sewell are exquisite. The figure studies of Miss Emma J. Fitz and Mrs. Catherine Weed Ward will also be found pleasing, as will the illustrative Shakespearian pictures by Mrs. Charles W. McCutchen, nor should the large animal studies of Miss Sarah J. Eddy be overlooked.

All in all the collection is one which I think you will all enjoy as giving you evidence that there is more of art in photography than you had thought.

Notes.

A NEW APPLICATION OF "PROCESS" WORK.—While the compositors on the *Petit Bleu*, a Brussels illustrated newspaper, were on strike, the publisher managed to produce the paper without their help. He had the matter typewritten and made up along with the illustrations on large sheets of cardboard. This was photographed to regular size, printed on zinc and etched; and the sixteen page paper appeared at the usual time.

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By Nellie M. C. Knappen.

"OUT OF THE NIGHT"

One of a series of pictures awarded first prize Class I., AMERICAN AMATEUR
PHOTOGRAPHER Beginners' Print Competition.

URANIUM TONING.—The difficulty in getting the desired red color by uranium toning sometimes complained of, according to M. Clerc, in a paper before the Société Française de Photographie, is accounted for by the fact that the color depends on which of the salts is in excess in the solution; brown from uranium, red when ferricyanide, and warm sepia when the proportions are about equal. The combining proportions are, uranium nitrate, 504; potassium ferricyanide, 658.6; so if they are kept in ten per cent. solutions, 50 minims of the former and 65 of the latter will be near enough to equal proportions; and consequently 50 and 70 respectively, with the necessary quantity of acetic acid and water, should give the desired red tones.

A NEW FILM.—A German manufacturer has introduced a new film free from every suspicion of malign influence on the emulsion and twenty-five per cent. cheaper than glass plates. The emulsion is spread on collodion coated paper; treated exactly as ordinary plates or celluloid films, except that to the last washing water is added a few drops of glycerine, and the negative squeegeed on to a similarly coated paper, also soaked in the gelatine solution. The two papers are then peeled off, leaving the negative enclosed between two films of collodion. There's money in it to whoever will furnish something of the kind on this side.

EXPOSURE THROUGH THE BACK.—Readers with more time than is at present at our disposal, might do worse than try to corroborate or otherwise the assertion of Liesegang, to the effect that the effect of exposing through the back; that is with the glass side of the plate next the lens, is equal to employing a multiple coated plate, so far as freedom from halation, latitude, and other known advantages are concerned. Of course, in focusing, allowance will need to be made for the thickness of the glass, and reversal of the image will have to be put up with, although to those that print in carbon that will be a real advantage. We hope the method will be found all that is claimed for it; as, more than anything else it would lead to a large increase in carbon printing; of all methods the best.

A NEW ELECTRIC LIGHT.—Professor Nernst, a young German scientist, has made a discovery that will probably bring about a revolution in electric lighting. Concerning it *The British Journal of Photography* says: "Those who were fortunate enough to be present at a recent meeting of the Society of Arts had presented to them, by Mr. Swinburne, a masterly exposition of the theory of electric and other incandescent lighting, with practical illustrations of Professor Nernst's invention. At the conclusion of his remarks, Mr. Swinburne said: "It is difficult to discuss an invention like this without being carried away by enthusiasm. I feel, how-

ever, that I have but feebly shown forth the probable future of what seems to me the greatest invention in electric lighting that we have known for many years. Still, I am sure I have not been too sanguine." There is no doubt that the publicity and eclat given to the invention by a lecture before the Society of Arts will so make it known that, if it possesses anything like the merit claimed for it, we shall indeed see a revolution; and so simple is the new lamp that we may expect to see electric lighting in the studio the rule instead of the exception it now is. The simplicity of the whole thing is so striking that the chief wonder about it is that no one thought of it before. An infusible refractory earth is made into a rod, and being under ordinary conditions an insulator, electricity will not pass through it; by heating it with, for example, a lighted match or a spirit lamp, it at once becomes a conductor, and the resistance it offers to the current brings it to a state of brilliant incandescence, rivalling the electric arc and completely putting into the shade the ordinary incandescent carbon filament of the now common incandescent lamp. Already experimental lamps have been successfully worked for 500 hours, and it is anticipated that eventually the life of a lamp may be prolonged almost indefinitely. A familiar note was struck in the discussion by Mr. W. M. Moodey, who, in congratulating Professor Nernst upon his invention, said they must take care he had the credit of it, and "was not robbed by a number of people who would immediately be writing to the *Times* to say they had done the same thing in their back kitchen twenty years ago. This was what always took place in the case of a new invention." Photographic inventors know this to their cost; indeed, there could scarcely be named a business or profession making use of new inventions which so many inventors had been robbed of their ideas, which had laid the foundations of others' fortunes.

PACKING NEGATIVES IN A BRANDY CASE, AND WHAT CAME OF IT.—The *New York Times* tells an amusing story showing the consequences arising from packing negatives in an empty brandy case. It would seem that Lieut. S. F. Massey, on going aboard the steamship "Alleghany," on which he sailed from Limon to New York, placed in the hands of the steward three demijohns of mineral water, and a quantity of negatives in a box marked "K. & F. Martel, Cognac," and thought no more about them till his arrival.

Safely arrived in New York, the lieutenant applied for his property and got the demijohns, but the "box of brandy" had disappeared, and for three weeks application after application failed to find it. The suspicion that some thirsty soul had opened it and not finding what he wanted and expected had, to cover his fault, made away with it, was natural, and at

last the court was appealed to, to secure reimbursement for the loss. But courts move slowly, and before they had decided who was to blame and what was to pay, the negatives were found and the cause of their disappearance shown to be the nature of the box in which they were packed.

It seems that the ship's signals are kept in similar whiskey and brandy cases, and during the voyage the chief officer had ordered a number of them to be stowed away in a locker in the forepeak, and several months afterwards on having one of them opened it was found to contain the negatives. Moral: Don't pack negatives in liquor cases.

SLOW GENERATION OF ACETYLENE.—According to a writer in *The British Journal of Photography*, acetylene is sometimes in some generators produced so rapidly as to evolve heat enough to make the carbide red-hot. The remedy for this is to generate slowly, and that may be best accomplished by adding sugar to the water. The writer in question says "a saturated solution," which may mean the official *syrupus*, two parts of sugar to one of water, and as in practice about twenty ounces of water is required for the decomposition of each pound of carbide, that will, in this land of the blessed sugar trust, add at least twelve cents to the cost of each five feet or less of the gas.

The Contribution Box.

COMBINED BATH.

IN your "Contribution Box" article for February, from Agnes Sutherland, her reference to the objectionableness of the combined bath when it becomes dirty is the common experience of perhaps all the users of it, and like the author of the article I do not like it, nor have I seen one effectual method advocated to overcome it, but I believe an efficient means is within the reach of all. My plan is to heat the bottle containing the combined bath in a kettle of hot water; upon cooling, all the sediment will be found at the bottom and the solution quite clear; it is then decanted off and the sediment washed out.

FRED. T. JENNINGS.

IMPROVING THE NEGATIVE.

In the "Portfolio" you are always down on white water and sky and black shadows; on white and black where they should not be, but from whence, till a day or two ago, I could not keep them.

I get rid of them by a method generally known, but so generally believed to be difficult that few have had the courage to try it. I have tried it with great success and find it so simple that I am anxious that all should know and employ it.

The material required is solution of hypo and red prussiate of potash, a tuft of cotton, and a tube of gamboge.

With the Farmer's solution, made by adding a few drops of the red prussiate to a teaspoonful of the hypo solution, enough to make it a deep straw color, on the cotton, I go over every part of the negative that is too opaque until it is translucent enough to print just the desired tone.

After washing and drying, the too thin parts are gone over by daubing them with the ball of the middle finger charged with the gamboge. From a little of this squeezed out on a piece of glass it is easy to charge the finger with much or little as may be required, and after a very little practice, it is easy to daub any part quite smooth, like a well laid on wash.

In from fifteen to thirty minutes it is easy in this way to so improve a negative as to make it difficult to believe that prints made before and after treatment were from the same, although indeed they are not the same, as a bad negative becomes a good one.

W. M. BARCLAY.

Words from the Watch Tower.

BY WATCHMAN.

THE *Scotsman*, the leading newspaper in Scotland, in a review of a book on photographic optics, speaks thus of photographers, "Photographers are not, as a class, distinguished either by the extent or the profundity of their knowledge of things human and divine," a gratuitous insult that should have brought down on the shoulders of the young—only a young reviewer could so write—reviewers something that would help him to cut his wisdom teeth. But, alas! he is likely, for this time at least, to escape scott-free, as even the most determined upholder of the dignity of the profession must hang his head in contemplation of the fact that coeval with the objectionable declaration, the ballots for the election of the office-bearers and council of the Royal Photographic Society, the members and Fellows of which are supposed to be at the very top of the tree, were being filled up, and, wonderful to relate, simple as that operation is, when they came to be counted, of 250, thirty-three were found to be invalidated "for various reasons." Just think of about seventeen per cent. of Royal members not knowing how to fill up a ballot paper.

* * *

Foolish, and even more questionable actions are not altogether the prerogative of American municipal bodies. The Paris Municipal Council

has got itself into a pretty kettle of fish by voting the sum of 40,000 francs for the engraving of certain of the pictures in the Hotel de Ville. The newspapers, lovers of art, economists and everybody who knows anything about it are down upon the ignorant or self-interested members for wanting to pay ten times as much for engravings that are at best only the rendering of the engraver and of which the work of no two engravers are alike, instead of, at a tithe of the cost, getting photogravures that are faithful translations, and show even the brush marks of the artist. Is it possible that the potent "pull" has crossed the water?

* * *

If cheapness will help to gratify the desire of those who are anxious to revive the interest in stereoscopic slides, surely William Taylor, of Birmingham, England, deserves their gratitude. He holds probably the largest and most varied assortment of the slides in England, including over 4,000 different subjects of the British Islands, and is offering them at a shilling a dozen, two cents each; and according to *Photography* they are stereoscopic slides that *are* stereoscopic slides, in contradistinction to those that were bad and badly mounted, and that more than anything else contributed to the decay of what should be one of the most popular phases of photography.

* * *

I have a crow to pluck with "Lux," who writes regularly and in general sensibly in *The Amateur Photographer*. Speaking, in the number for February 17, of a Mr. Inston, who is apparently a medal winner, he seems to indicate that his success is at least partly due to a special method of developing platinotype paper, and adds "very properly he declines to tell his best friends what this trick is." If those that had gone before had acted so "very properly" it is to be feared that neither "Lux" nor his protege would have known much about platinum printing or anything else connected with photography. No, friend "Lux," the man that sucks the brains of others and keeps to himself any trifling improvement that chance may show him, for the sake of winning a medal, or for any other reason, does not act "properly" and is not entitled to "honorable mention,"

* * *

It is not safe to believe all that one reads, even in a New York daily, and surely one of those must have been drawing the long bow when it recorded as a fact that the renowned George Rockwood, the champion and ex-vice-president of the Photographers' Copyright League, had copied

and was selling for filthy lucre a photograph of the no less renowned Hobson of osculating notoriety, taken by Buffham, of Annapolis, and when Buffham remonstrated against what he considered an unbrotherly act, the only satisfaction that George would give was the declaration that he was legally entitled to do what he had done, the photograph that he had copied, and to which, so at least it is said, he had attached his own name, not having been copyrighted.

* * *

But there are generally two sides to a story and sometimes more than two. Perhaps the photograph was taken before the kissing or what led up to it began, and in the ordinary way of business, and if so the copyright or the right to copyright it belongs to Hobson, and Buffham has no more right to it than I have. Under those supposable circumstances, it is no great stretch of imagination to suppose that the admired of so many fair though foolish ones, willing to let the admirers have something less fleeting than the osculatory action, authorized Rockwood to supply copies of his photograph to all who chose to pay for it.

* * *

Translators are not always to be trusted, especially when dealing with matters technical. An amusing example occurs in the March number of a contemporary. The subject is Mercier's employment of antim-potassio-tart, as a remedy for over exposure; that was noticed in THE AMERICAN AMATEUR PHOTOGRAPHER several months ago; but instead of *tartar emetic*, the photographer who wants to test its power as a retarder and contrast producer, is told to considerably over expose, and before development dip one-half of the plate in a solution of *tartaric acid*!

* * *

A photographer should always be willing to learn. Here is something that I at least did not know. A writer in an illustrated article in a contemporary, referring to the blackness and lack of detail in the figures in one of the illustrations, says: "As in all photographic pictures of northern winter views, the figures of the two boys appear black, with some obscurity of detail. This peculiarity, due to certain physical properties, is well seen in most of the figures of the men in the half-tones illustrating Dr. Nansen's book." But perhaps, "physical properties" may be just a new name for under exposure.

* * *

Who would have thought that the way, or one of the ways at least by which a lecturer may earn the especial thanks of a lecture committee, is to

fall down a stair and nearly break his back and quite break some of his best slides? But so it seems, as may be gathered from the following extract from the "Club Notes" that appeared in *The Camera and Dark Room*, the organ of the "N. Y. S. A. P.," the advent of which was noticed last month. "Mr. Chambers, of New York, gave a very fine lantern slide exhibition which very much pleased the members. We thank Mr. Chambers very much, *particularly as he was going down the steps to go home he fell*—or rather slid and nearly broke his back and did break some of his best lantern slides." The italics, of course, are mine, but what I should particularly like to know, is, is it necessary that the slides to be broken should be the best, as one might trust to his back healing, and might be willing to risk it, but one of his best slides—Ah! I think I would think twice about that.

* * *

Our young friends should be careful as to the advice they give to inquiring readers. In the same number of the neat little magazine, in reply to one who wants to know how to prevent prints from sticking to ferrotype plates, they say: "A very good method to get a first-class polish is to first let your prints dry and then soak them in water for a few seconds and *paste them on the ferro plate* and they will not stick if the paper has no blisters." The italics are again mine, and I know how difficult it sometimes is to make a pasted label stick to a tin surface; but, as before, I should think twice before I *pasted* a print on a ferrotype plate if I wished to get it off when dry. They should try a rub with French chalk.



Photographic Uses of Uranium.

BY B. O. B.

URANIUM furnishes us with the most powerful intensifier at present known in photography; it also gives delightful tones on bromide or platinotype papers, and last, but not least, with its aid can be prepared a little known printing process, which for simplicity and beauty has few rivals. A detailed account of these various uses to which the metal may be put may perhaps prove of practical utility to some of my readers. We will consider each in order.

The nitrate is the salt used, and though I had some difficulty the other day in obtaining it in a provincial town, it is commonly stocked by pho-

tographic chemists. It is a good plan, having bought your ounce of uranium nitrate, for you to dissolve it in water and make up to five and a half ounces. By this means you know that every drachm of the solution contains roughly 10 grains of the chemical.

As an intensifier, uranium acts in two ways—it both alters the color of the image and builds it up—and, most convenient of chemicals, if the intensification is unsatisfactory, the application of a weak solution of washing soda will restore the film to its original condition. The best formula is:—

Uranium nitrate	100 gr.
Potassium ferridcyanide	100 "
Glacial acetic acid	½ oz.
Water	10 "

This solution does not keep well for more than a week, and only for that time if kept in a dark place. The negative must be thoroughly washed to free it from hypo. If old negatives are being treated, it is advisable to soak them first, so that the gelatine may be softened. The film will turn a rich red brown, which, in itself, gives great increase of density, and then the silver image is gradually built up and strengthened. Allowance should be made for an increase in density in drying. Local reduction may be effected by a brush dipped in a weak solution of washing soda. When the negative is sufficiently intensified, wash in a stream of running water till all signs of greasiness leave the film.

As a toner for bromide paper and lantern slides, a solution of about one-third the above strength should be used. It intensifies as well as tones, and prints to be toned in the bath should be below the required density. The tone given varies from a warm brown to a Bartalozzi red. Here again, if unsatisfactory, the effects may be removed and the process repeated *ad lib.*

As an intensifier or toner for platinotypes, uranium gives excellent results. The following solution is sufficient to tone a dozen half-plate prints to a rich warm brown:

Uranium nitrate	5 gr.
Acetic acid	5 min.
Potassium ferridcyanide	5 gr.
Ammonium sulphocyanide	20 "
Water	4 oz.

When sufficiently toned, the prints should be washed in water containing a faint trace of acid.

Let us now turn our attention to printing with uranium, a process which is simpler than it appears to be at first sight, although we have to prepare our own paper. This is easily done by floating it on a solution of uranium nitrate; strength just about that of the stock solution of the salt I recommended you to keep in the beginning of this article. That would be:

Uranium nitrate 1 oz.
Water 5½ oz.

The floating should last about ten minutes, and be performed in a dull light. Dry in the dark or by artificial light, which has no effect on the paper.

The exposure varies much according to the strength of light. Generally, it is about twice that of P.O.P., but experience will be found the best guide. The length of exposure is the only drawback I know of connected with the working of the paper.

The developing solution consists of:

Potassium ferridcyanide 10 gr.
Nitric acid 4 min.
Water 6 oz.

Float the exposed surface on this. In about six minutes development will be complete, and the image will appear of a rich brown. Fixation is accomplished by washing for a quarter of an hour in slightly acidulated water.

It is also possible to produce gray tones by floating the exposed paper on a solution of silver nitrate composed of 40 grains of the nitrate, 4 ounces of water, and four drops of glacial acetic acid. The image soon appears if a full exposure has been given. If not, it may be developed out by a weak solution of gallic acid. It should be fixed in hyposulphite of soda 1 ounce, water 20 ounces. The picture may be toned by gold or platinum, in the usual way.—*The Amateur Photographer*.

American Interchange Slides.

AKRON (O.) CAMERA CLUB.

Thirty-nine slides come from this club, by only three members; but it is a record set in freedom from the besetting sin of American slide makers, bare glass where no bare glass should be.

E. W. Terras leads off with twenty-six, all, with one or two exceptions, good, and some very fine slides. One exception is a cat, the head and shoulders of which

more than half fill the slide, and which, on a ten or twelve-foot screen appears as large as an ox. "On the Tow-path," No. 2, would have been the better for a little more development. "Soo Lock," No. 38, is very effective, as an example of how much natural clouds contribute to a picture, and as much may be said of the "rubbed in" sky of "Falls of the Cuyahoga." No. 10, "Sharing Honors," No. 26, and several others. Exception must also be taken to "Trained by Experience," No. 15, the bust of a woman. On the slide it is $2\frac{1}{2}$ inches, showing on the screen something like a sixteen-foot female monster.

H. E. Canfield also does excellent work. His "Boston Ledges," No. 30, is technically the most perfect slide in the set, and an example well worth working up to. Its selection is also admirable. Very good, too, is "On the Ohio Canal," No. 33, and peculiarly effective is No. 34, a winter view "On the Ohio Canal," with its fine atmosphere, and a little more development would have made it more so. The two children, Nos. 8 and 32, are very fine photography, but far too large, being at least seven feet tall on a ten-foot screen.

Charles Knight's slides are all good, and owe much of their value to skies on the cover glasses; indeed, some of them, such as the "Birth-place of P. Chase," No. 29, would have been poor without it. It is a very effective slide. Fine, also, is "Home of an Old Letter," No. 11, and its beauty is enhanced by just sufficient fog to take away the bare glass effect. His best slide is "Maple Side," No. 36, a slide that without the rubbed-in sky would have lost its greatest charm.

NEW BRITAIN (CONN.) CAMERA CLUB.

This club is well up in its number of slide makers, the set of fifty having been contributed by fourteen members.

Dr. E. P. Swasey leads off with fifteen, mostly views of foreign or classic subjects. They are all far above the average, although a few, such as "At the Foot of the Giessbach," No. 12, and "Goat Herds on the Campagna," No. 9, are on the flat, lacking in contrast side. "The Wetterhorn," No. 6, is excellent, and largely helped to be so by the lower tone of the sky. The "usual" clear glass sky would have ruined this by depriving the snow with contrast. "In Old Venice," No. 4, is an example of a slide so spoiled, the large expanse of bare glass throwing the picture quite out of tone. "On the Campagna," No. 1, would have been fine but for the want of contrast. "Tivoli," No. 14, with its fine cloud effect, is a beautiful slide, and equally so is "In Tivoli," No. 7.

E. P. Stipek's "Alert," No. 16, is a slide of the very highest quality, but his "Bit of Winter," No. 17, is far below mediocrity. Snow is not even suggested by a large patch of bare glass, bare-glass tree trunks and bare-glass rail fences. Equally worthless, and for the same cause, is G. C. Atwell's "The Down Express," No. 18.

A. B. Way's "Polish Coal Pickers," No. 19, is a little better, but sadly wanting in values; equally so is G. J. Turnbull's "Ivy Elm." This will please a general audience, but its clear-glass sky and water is offensive to the cultured picture lover. Very different, and, indeed, very fine, is "A Snug Harbor," No. 20, in which the fine sky plays a part hardly second to the rest of the picture.

F. B. Wood's "Horseshoe Dam," No. 22, is technically a good slide, but as a picture, somewhat confused. A fourth on the left covered by the mat would have given a better composition.

D. A. Niven's "I'm So Cold!" No. 23, is utterly false in tone, not even white and black, but white and gray. It is a poor slide from an equally poor negative.

John Barrett's "Fishing Through the Ice," No. 24, is good, and a little more development would have made it better.

E. T. Porter is well up in the work of both slide and picture making, but he should not have so muddled his "Coming Through the Rye," No. 26. The rake is a mistake, and the stiff, staring figure is worse, and the pity is all the more because the technique of the slide is so perfect. But the other three redeem him; they are fine, very fine.

J. A. Lewis aims high, and has gained a large measure of success, although most of his pictures, and pictures they really are, would gain by losing; that is, by closer matting. For example, "In Straitsville," No. 32, as it is, is a pretty picture, but by covering up about three-quarters of an inch on the left it is made much more charming in its simplicity. "You Don't Say So!" is a bold picture, the outcome of a bold effort, and a very decided success, and equally successful is "The Old Red Mill," No. 35.

S. B. Bassett's "Near Withersfield," No. 36, wants contrast, and the water is bare glass.

J. Bartlett's "Tender Babes," No. 37, is amusing, but only a passably good slide.

E. M. Hulbert is also climbing, with a pretty high aim, but he will not get higher till he realizes the necessity of true values. He had a grand subject in "The Outlook," No. 48, but although sky and water are far from bare glass, they are equally far from true, and, although it is a beautiful slide, it will be very much more so when truly rendered. Better in values is "Road View," No. 48, and when well lighted, a very fine slide. Fine also is "Charcoal Pit," No. 45, but "Storm on the Shore," No. 46, is far too weak, as is both sky and water in "Lakeside Drive," No. 40.

All in all, the New Britain set of slides is well up in the Interchange, and the evidence of effort on the part of so many of the members is a gratifying feature.

BUFFALO (N. Y.) CAMERA CLUB.

The Buffalo club has always been well to the front, both in the number of its slide makers and the quality of their work. The fifty slides of this set are contributed by fourteen members, and, with a few exceptions, both on the extra good and the very indifferent side, they may be characterized as of the highest class of professional work; considerably above the slides of all but a few of the very best professionals, but about as much below those of the very best amateurs. Before they reach this higher standard they have yet to learn more thoroughly that the most important feature of a slide is not what is usually called "clean, clear and sharp," but true values and full gradation.

J. P. Zemmer's "Scraping Acquaintance," No. 1, is of good technique, but the figures are too large, and "The Cave of the Winds" and "Horseshoe Fall," Nos. 30 and 31, would have been better of greater density.

P. J. Knapp's "Choir Boy," No. 2, would have been better of longer exposure. "An Enthusiast," No. 29, is much too flat, being on the screen simply gray, but his "Outward Bound," No. 12, is one of the finest slides in the set.

C. L. Baer is not quite even, but he deserves credit for experiments in color. The blues, especially the "Grindelwald Glacier," No. 38, are far too cold. In a warmer color this would have been a fine slide. The blue is equally objectionable in "Nuremburg," No. 37, which is otherwise worthless from its clear-glass sky and water. "Mary Had a Little Lamb," No. 23, is much better. Fine, too, is "A

Letter from Jack," No. 3, and "Eventide," No. 43, and he only needs to more fully realize the evil influence of clear-glass skies to reach the highest rung of the slide-making ladder.

W. H. Smith's best slide, and it is very good, made so by the lowering of the tone of sky and water, as if pyro-stained, as is "The Glen Was Fair, etc.," No. 8. "In the Genesee Valley," No. 34, is also very good, and "Spring-time," No. 4, is effective, although a little too glassy.

H. H. Boyce's "A Summer Holiday," No. 10, is a beautiful subject, a fine picture, and with sky and water lower in tone, would have been a perfect slide. A trace of fog, even, would have given the lacking charm. "Aren't They Cute?" No. 6, is also a little too glassy, but a slide that will be popular.

J. Savage's "An Eclipse of the Moon," No. 50, is the work of an artist, and a charming slide, and "Dare I Venture?" No. 7, is excellent, both in design and execution.

J. B. Newman's "Southern Hostelry," No. 9, is false in tone, the road being as if covered with snow. Both exposure and development are at fault.

H. W. Saunders' "The Gathering Storm," No. 20, is perhaps the champion slide of the set, but why he, who can make such a slide, should also exhibit "Quietude," No. 33, with such an expanse of bare glass, instead of a sky, is a puzzle. "A Spring Morning," No. 16, is effective, but hard; and but for the tendency to bare glass all his others are far above the average.

L. V. Cock's "Scene on Long Island," No. 15, is one of those pictures over which the classic Jew is credited with rejoicing, because he can cut it across the middle and sell two pictures, instead of one. A foreground of water, the middle distance, the opposite bank, with a row of trees; and bank and trees are so reflected that it is immaterial which side is up; and, if possible, to make things worse, both sky and water are almost bare glass. Such scenes are pretty in nature, but should never be photographed.

C. G. Rhodes.—What was said of No. 15 is equally applicable to "Nature's Mirror," No. 18, only it is a bridge of three arches that is reflected, and only a portion of which is allowed to fill up the whole space. "A Shady Nook," No. 19, and "Clear as the Waters," No. 13, are far too much on the glassy side.

John A. Stein's "Primitive Farming," No. 22, is a "summer snow" slide, in which white boards are employed to cultivate white ground, under a pure white sky; the kind of slide to please a popular crowd, but which no amateur should think worth mounting, while his "Sunset," No. 45, is one of the three best slides in the set.

W. G. Houch's "Barren Winter," No. 26, is a fine and fairly true rendering of a difficult subject, and the same may be said of "Jack Frost," No. 27, although this would have been better for longer development.

ST. LOUIS PHOTOGRAPHIC SOCIETY.

The fifty slides from this society are credited to only six members, and taken as a whole, they are, perhaps, a little below the average. Their art is very much better than their technique, as in most cases the selection is admirable, and the negatives evidently of good quality, but instead of getting on glass a far greater range of tone than on paper, most of the slides include very much less; dark and light only, or, at most, dark, half-dark and light.

R. E. M. Bain's "Greek Locomotive," No. 14, and "Tomb of Cecelia," No. 15,

are bare glass to an intolerable extent, and nearly as bad are "Piazza de Popolo," No. 4, and "Olive Tree," No. 6. "Wharf at St. Louis," No. 9, is a very fine slide, and the difference between it and the others is simply the absence of bare glass. "Sunset," No. 13, is a strikingly effective slide.

John W. Dunn where he keeps from excessive bare glass, makes fine slides of fine subjects, such as "Tuesday," No. 19, and "An Interesting Letter," No. 23; very fine is "Under the Mistletoe," No. 21, but "The Lady of the Lake," No. 22, is too feeble; longer development was needed.

John B. Holman is freer than any of his fellows from the common fault, and his slides are all much truer in values. The best in the set is "Bourbon Spring," No. 26. Good, too, is "Falls of St. Anthony," No. 28, but the bare-glass sky of "Flood of 1897," No. 32, spoils an otherwise very fine slide.

Dr. C. H. Goodman selects so well as to make us regret all the more the utterly false values of so many of his slides. "Streets in Verona," No. 41, for example, is a very fine subject, but on the screen a few black outlines and all the rest white. That it is a waterway is only guessed by a part of a boat appearing in a corner. Almost, if not quite, as bad, is "Street in God's Hill," No. 40, a beautiful subject, but road, hedges, etc., are as if covered with snow.

D. B. Howard sails in the same boat, although we should make an exception of "Cliff House," No. 50, in which, although sky and water are far from true, they are a little lower in tone, and make it a fairly effective slide.

A. Oloff's two attempts at coloring are more than usually successful, although they look better on the slides than on the screen, but why not tint the sky in "Peek a Boo," No. 50? The clear glass throws all the rest out of tone.

At the risk of seeming to apply the flail to threshed-out straw, we feel constrained to ask why it is that so many photographers, whose work shows that they realize the value of, even the absolute necessity for, something approaching true values in their prints on paper, are content to make and even send into circulation slides on glass so glaringly untrue as many, we might almost say most, of those contributed to the Interchange.

It is true that the uncultured (artistically) and indiscriminating crowds that attend lantern exhibitions prefer and applaud the "clear" slides, and not unfrequently the lecturer knows as little of art as his audience. Professional slide makers, or many of them, have catered and continue to cater to the demand thus created, both because such slides "sell" and because it is easier to make them than to make those of true tonality. But we cannot suppose that the amateur slide maker is influenced by either of these reasons, and are shut up to the belief that long looking at such slides has so weakened his perception that he does not see their faults or recognize the vast difference between them and slides of true values. How else can we account for the frequently occurring fact that of, say, six slides contributed by a member, one or two may be what we have called champions, slides including every degree of gradation that was in the negative, and in every other respect satisfactory, while the others were simply black and white; dark, half-dark and bare glass; showing a sunny summer scene as if covered with snow. Surely, his wish was to be represented at his best; the two would have done that better than the six, and the fact that he sent the faulty four is fairly good evidence that he did not see their faults.

A good glass transparency is probably the most delicately beautiful of all photographic productions, but it is so only when it includes every degree of detail that

was in the negative, and its vast superiority over almost all other printing methods lies in the fact that it is capable of rendering that detail. But, like most other good things, success does not come without effort, and in the right direction. In negative making, the general practice is to modify the developer to suit the exposure, and by suitable modifications good results may be produced from very varied exposures; but with slides no such latitude is permissible.

For the best results the developer should be a fixed quantity, a solution rather weak in reducer, and restrained just enough to secure freedom from fog, and the exposure made to suit it. In this way the result depends altogether on the exposure, and it is necessary to find by experiment the exact time that will produce the desired effect; which, if the negative has been suitable, is a slide full of delicate detail, with some detail in even the deepest shadows, and with bare glass only in the highest of high lights, of which there will be very few.

By this method, as will be obvious, where there are negatives of various densities there will be need for many experiments; indeed, a well-known slide maker at a recent meeting of one of the British societies, said that he rarely got more than two slides from a dozen plates, and was perfectly satisfied if he got only one; and he was right, as his one is worth many dozens of the average "summer snow" variety.

Our Portfolio.

[Prints sent for criticism - *not more than one at a time*—should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*, and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in THE AMERICAN AMATEUR PHOTOGRAPHER.]

351. HARRY E. PENNY.—"Usefulness Outlived" would have been better if it had included only a part of the old building, say, just to and including the chimney, and the excluded space given to the matter on the left. Otherwise the design is good but the photography is bad. From under exposure everything is just white and black; the board roof whiter and the trees blacker than ever were roof and trees. The large expanse of sky represented by white paper, would be ruinous to any print.

352. J. A. CUMMING.—There is material in the subject for a good picture, but you have not used it properly. The matter on the left is so unpicturesque and so prominent that it keeps the eye from instead of leading it to the beautiful distance. Then the sky and water, unless where the dark reflections fall, are simply white paper. Try again, but exclude the whole of the ugly triangle beginning at the lower right and ending near the top of the left, and expose long enough to give very much better values.

353. W. O. PEARSON.—There is really nothing to criticise in your reproduction of a portion of an old ruined tower, except that it is considerably under exposed, and that the view would have been more interesting if it had included more of the surroundings of the ruin. You should not be content with such purely white and black.

354. R. H. CLARK.—The unnamed print is a good photograph of a small waterfall surrounded by masses of rock, but belonging to the reproduction, rather than the pictorial class. No. 3 has the best values. It is an excellent reproduction of a not very interesting subject.

355. C. H. WILKINS.—“Pine Point” has not been sufficiently developed. It is a good subject from a good point of view, but where there should have been some indication of detail is simply black paper. Probably a longer exposure and certainly much longer development was necessary.

356. W. E. COGSWELL.—The “Portrait” is a fairly good example of professional portraiture, sometimes spoken of as “the usual thing,” an excellent likeness doubtless, but lacking in the most essential feature of true portraiture, the soul revealing quality; the something that tells of the inner man. The lighting of this is just a little hard, rendering the contrast on the face greater than is desirable and relegating the left of the dress to utter blackness. A reflector properly employed would have obviated this.

357. P. BUGBEE.—“The Bluff” is of no pictorial value and was not worth a plate except for its historical interest. It is a good photograph, and would have been better had it been developed in a solution weaker in reducer.

358. A. N. OYEN.—The unnamed print is a very good photograph, but of no interest as a subject. The left third properly arranged and as well photographed would make a good picture. Never forget that whatever in a picture does not help hinders, and two-thirds of the material on the right of this print is not helpful.

359. E. M. MILLER.—There is no pictorial interest in any of the subjects, at least as they are represented. We select “The Wood Cutter” because it does suggest something. The last log, for example. One prostrate giant of the forest surrounded by a second growth of saplings and the wood cutter preparing it for transportation to the mill, gives food for thought which none of the others do. But it lacks as do most of the others, a most essential feature in pictorial photography, true tonality, or values. Take the young tree on the right as an example of the whole; on the one side it is perfectly white, on the other side perfectly black, without a trace of gradation. Serious under exposure is the cause. You have got to that stage at which you should devote all your energies to the securing of true values, and nothing short of sufficient exposure will give that.

360. GREGG D. WOLFE.—“On the Pike” is not interesting, not from the right point of view, and not a good photograph. The middle of the road is rarely a good point of view, and the road that goes straight up and ends in the middle of the picture, instead of winding and going out, is neither picturesque nor suggestive; and the exposure has not been nearly long enough; everything except the sky and a few points of light being simply black paper.

361. A. S. VAN DRESIN.—“Sunset” is not a successful representation. A far too short exposure has resulted in great masses of perfect black above, in the middle and below, with only a few poles and branches silhouetted against several bands of white. Compare it with some of the sunsets reproduced in our pages and you will realize where you have failed.

362. ANDREW EMERINE, JR.—“The Rose.” The trimmed down print is very much more effective than the one showing the whole figure, and a comparison of the two affords a valuable lesson in the beauty of simplicity. The one includes

all that is necessary to convey, and to do so beautifully, all that is intended, while the additional matter in the other distracts the attention and weakens the impression. Conception, composition and lighting are all excellent; the one fault being slight under exposure. Just a little longer would have given truer values. We shall reproduce it.

363. A. MERGENTHALER.—“A Bit of Winter” is not quite satisfactory either in arrangement or execution. The horizon is too low, only one-sixth from the bottom instead of at least one-third, and in this case, where the sky has no influence, even much higher. Then the sky is almost, if not altogether, as white as the snow, which is far from anything like true for any sky, and especially so for one representing a wintry day. Longer exposure and development in a solution much weaker in reducer would have altered the tone.

364. C. L. HAYS.—“Bovine Bliss” is a pretty little picture with just one serious but at the present time, far too common fault, under exposure. Subject, arrangement and fine suitable sky, are all very good, but the values are far from true. The water is too white and the cattle too black, as are also such parts of the foliage as are in shade. A little more exposure would have made this in every sense a charming pastoral scene.

365. JOHN H. SCOTT.—“I’ve Got a Bite.” In the subject you had material for a good picture, but have sadly misused it. A narrow stream with five figures on each side, and one of them, a boy, apparently disturbing the water with a stick does not convey the idea of fishing, or indeed anything else; and if it had, its value would have been much lessened by the unconnected spaces to the right and left. As it is, it is vastly improved by trimming $1\frac{3}{4}$ in. from the right, and $1\frac{1}{2}$ in. from the left, and would have been better still, much better, as an upright. The photography is faultless, but the figures convey only the idea of having been arranged to be photographed.

366. H. C. RISING.—“Father,” a well-to-do-like gentleman reading, probably the evening chapter, has only one fault, which you will readily recognize if you will simply cover the lamp with your finger. Had you so managed as to give the idea that the lamp was the source of light it would have been all right, but as it is evidently not so it is both useless and distracting. With that exception it is a very satisfactory portrait, although a slight improvement would be a little lowering of the tone of the book, only a very little.

367. C. C. AUGER.—“The Sluice” has no pictorial or indeed any kind of interest. It begins well with a good foreground and the thick branches on the left correctly lead the eye to the objective point; but that is a huge, unpicturesque square sluice or water gate, with an equally unpicturesque square building behind it. The sky and water are simply white paper. Better photographed, that is photographed so as to represent water and sky as they should be, a strip an inch wide on the right would have been a pretty decorative panel.

368. R. A. MILLER.—“Mount Cardigan” is a well-selected and well-photographed subject, but printed rather deeply and toned to too cold a shade. It should have had a sunny rather than a sombre effect. It is the best example of your work that we have as yet seen, and would have been a little better without the disturbing straight lines that close up the view in the middle distance.

369. F. L. WILSON.—“Conception Mission” has no pictorial quality, but is an example of the value of photography as a reproductive agent. A picture might

have been made by including with the buildings their surroundings, but, as here they occupy the whole space, it is merely an architectural subject, and to such the well known aphorism "suggestion, not depiction" does not apply. In other words, an architectural subject should include detail and definition to an extent considerably greater than this does. The pure white sky is also a serious fault, as it throws all the rest out of tone. Lack of exposure has prevented your getting true values. See Answers to Correspondents.

370. C. H. HAMILTON.—"Entering the Lock" is a fairly good subject, but not from the best point of view. The lock and bridge would have been more picturesque any other way than "square on," and the exposure has been far too short, resulting in the scattering of high lights all over the print.

371. L. A. DYAR.—"A Little Bashful" is a very good photograph, but children should never be taken stiffly posed and staring at the camera. You could turn the pretty, intelligent children to very much better account.

372. FRANK R. MILLER.—"The Amateur Musician." You are right, we do not like this style, although we frankly admit that there are very many who do. This particular example may be described as about three-quarters of a front face, four fingers of a hand, a mouthpiece and two or three points of light suggestive of a cornet, a pair of spectacles, and all the rest in deep, deep black. But the description altogether fails to convey the suggestion, and it is in suggestion that the charm and beauty of the picture lies, and the charm and beauty increase the longer it is examined and studied. It is on platinum, printed under muslin, a method, in our opinion, that should be avoided as an attempt to make a photograph look like what it is not; but you will understand that we rate it pretty high when we say that it is well entitled to a place in the most exacting Salon. Its one serious fault is the hand, which both to the eye and by actual comparative measurement is much exaggerated, and to avoid which you must employ a lens of very much longer focus. We should like to reproduce it, but will see what the engraver has to say.

373. W. S. NEWTON.—The unnamed print is a fine subject well photographed, but a little too deeply printed. But the inclusion of the very unpicturesque bridge with its oft repeated lines, both vertical and horizontal, was a serious mistake.

From a point of view that would have included only a small portion of the far end, say, to the extent of four or five of the vertical lines under the hand rail, it would have been a real advantage, leading the eye to the footpath across the picture, whereas as it is, it has no beauty itself and by its distracting influence keeps the eye from the real beauties of the picture.

374. RICHARD BEASTON.—"Waiting For the Rest of the Party" is one of a class of prints that we don't like to get, prints in which we cannot find a favorable feature. A cutter, a horse, and a man, all in a straight line, and so much under exposed that everything is black that is not white. The horse has only two legs in sight and his back, from the way in which he stands, is curved to an unnatural extent, and made still worse by the tying up of his tail. Then the lens has been very wrongly used or it is unsuited for the work, as the roots of trees, apparently only a few yards distant, are at the very top of the print. A high horizon is sometimes admirable, but in this it has flown away altogether. A picture might have been made with this material, but not without very much more thought than this had obtained.

375. HARRY FANSLEY.—“After a Snowstorm” is a fine example of a beautiful but difficult class of work. A picturesquely winding road bordered on each side by tall trees fully laden with recently fallen snow. In the foreground a cutter, the riders in which have stopped to speak to two female figures on foot, the darks of both cutter and figures serving admirably to throw back the distance. Everything is just as it should be except the too white sky. Had it been lower in tone the picture would have been perfect. We shall have pleasure in reproducing it.

376. E. A. DONNALLY.—“Cattle,” a group of five young cattle huddled closely together, is not a success, not at all interesting simply because you tried to group them, instead of waiting and watching till they had arranged themselves. Instead of the hour you “worked over them” a really good cattle picture is often the result of half a dozen hours waiting, but it is worth it. The absence of sharp focus is a real advantage in such a picture, but the white paper sky is intolerable.

377. JOHN HANNA.—“Quietude.” We are sorry to have to “hit you hard” again, but it is in love and for your good. We appreciate your aim and compliment you on the selection of a subject beautifully adapted for the production of the presently popular, low toned, marshy style of picture, but the rendering of such a large sheet of water by simply white or almost white paper, is fatal. Then to make a picture of such material, the sky *must* be made to co-operate, and that to a large extent. In this particular case, a much longer exposure and more careful development would give a better result.

378. W. H. S.—“The Break of Day” is a very good rendering of a difficult subject; that is, photography has been made to do all, or almost all that it can, but the glory of the dawn and the sunset is beyond its grasp, and this, good as it is, hardly, if at all, suggests it.

379. GEO. P. LESTER.—“Fountain Creek Valley” has no pictorial value, and is too much out of focus to be of topographical interest. For such large stretches of country, a telephoto lens or lens of very long focus is essential, as with ordinary lenses, as in this case, the distant mountains are dwarfed.

Our Table.

ILLINOIS COLLEGE OF PHOTOGRAPHY.—We are frequently consulted as to how best to acquire a sufficient practical knowledge of photography, and the business methods incident to its practice as a profession by those desirous of entering that field, but hitherto have hesitated to recommend anything beyond trying to get into some good establishment as an apprentice or learner. We know, however, that the best galleries do not care to be bothered with such people, and that when admission is gained the learner is left to pick up information as best he may, and hence, are glad to say that from information, both direct and indirect, we are in a position to heartily endorse the Illinois College of Photography, at Effingham, Ill., as being thoroughly equipped in faculty, appliances and accommodation to impart all necessary instruction. Prospective pupils may get all needful information by applying to the president, L. H. Bissell.

WUESTNER'S DRY PLATES.—We have now had an opportunity of putting to the test of practical and experimental work the Wuestner's Cyclone Dry Plates, sent, as noticed in our last, by the recently organized Wuestner's Eagle Dry Plate Company; and have pleasure in saying that they are in every way thoroughly satisfactory. They are rich in silver, and, although extremely rapid, are easily manipulated and readily give all needed density without intensification, and stand considerable forcing, more, indeed, than should ever be necessary, without the least tendency to fog. Unlike most of our plate makers, the Eagle Company do not, in "directions for use," confuse the tyro with a variety of formulæ. They give only one; but it leaves nothing to be desired; and, whoever, with those plates and that formula, does not get negatives of first-class quality, must blame themselves, and not the material.

For the benefit of those who employ the Wynne's Infallible Exposure Meter, we shall ascertain and give in our next the speed number in their relation to it of the Cyclone plates. In Wynne's latest speed card Wuestner's are rated at 56, but so far as our experiments have gone, we are inclined to believe that the Cyclone is nearer 90. They certainly are more rapid than some with which we have compared them, and which are rated 80.

"CAMERA NOTES" for April sustains its well-deserved reputation, both in art and literature, although in the former there is perhaps no one striking example standing high above all others, as in some previous numbers. The editor is to be complimented on the way in which he enables his readers to see how admirably the women are coming to the front, and congratulated on the reproduction of such charming pictures as those of Misses Käsebieer and Weil. Everyone who aims at picture making by photography should read the excellent and timely article on "Tonality," by Joseph T. Keiley, as on that rock, more than on anything else, they are wrecked.

Picture lovers will be glad to hear that the publication committee, in compliance with numerous requests, have decided to issue one hundred and fifty copies of a handsome portfolio, containing eighteen photogravures, printed on India, and mounted on heavy plate paper, 11 x 15 inches. The pictures will be the work of American photographers, twelve selected from the best that have appeared in *Camera Notes* and six not yet published. The price to subscribers will be five dollars, the list closing on the first of May, after which it will be at least doubled. So at least say the committee, but, knowing the quality of the pictures as we do, it will seem strange, indeed, if at the time of the closing of the subscription list, a single copy of the one hundred and fifty will be left unsubscribed for.

"THE BRITISH JOURNAL ALMANAC."—London, Henry Greenwood & Co., but to be got, we believe, from Mr. G. Gennert, New York.

Through a mistake in our publishing office this reaches us somewhat late in the day, but it is never too late to notice a good thing; and if ever there was a book worth more than its cost, this is one.

It is edited by Mr. Thomas Bedding, who has secured the assistance of over ninety contributors, some of them the best authorities on the subjects on which they write, and all of them having something to say that is worth reading and well to know.

The principal contents include an exhaustive article on "Color Photography," including practical instructions for the working of the Jolly process, now being exploited in Chicago as McDonough's, by the editor; a large number of contributions on practical subjects; a series of "Practical Notes and Suggestions of the

Year," an "Epitome of Progress During 1898," Miscellaneous Information, and the completest collection of photographic formulæ and recipes ever gathered together in one volume, thus constituting the Almanac of the greatest possible use to all photographers.

We should not omit to notice one little addition that is a big improvement. Preceding the usual collection of approved formulæ—which, by the bye, is given in both English and metrical weights and measures—there is an index by which, at a glance, any particular formula or table may be found, and we may add, that the study of the advertisements, of which there are nearly 1,000 pages, is alone an education in photography.

Letters to the Editors.

THE HAND CAMERA.

DEAR SIR: I have been for some time a reader of your valuable magazine, THE AMATEUR PHOTOGRAPHER, and its many useful articles and suggestions have been a great help to me; but an article in the February issue is so different from those usually seen in THE AMATEUR PHOTOGRAPHER, that I cannot refrain from commenting upon it. It is on "The Hand Camera" and written by Mr. George L. Taylor, who seems to be thrown into a state of wild alarm because a great many poor deluded mortals purchase hand cameras and take them along, perhaps to get souvenirs of a pleasure or sight seeing trip. Another grave cause for alarm is that some one may see these possessors of a hand camera and call them "photographers."

So everyone who wants to use a hand camera should purchase a stand camera outfit, costing a few hundred dollars, for certainly Mr. Taylor would not have them get anything but the best, and work until they are able to get a good snap shot with a pocket Kodak, or some other hand camera? How unfortunate that this article did not appear in the November issue, so that all those who intend to take a camera with them on their summer's outing could have spent the winter in using an expensive stand camera. As it is now, they will probably have to be classed with the "thousands who are equally foolish."

It would be a good idea for Mr. Taylor to examine one of the modern hand cameras, some of those that are made in Rochester, for instance, and he would learn that they can be used for something besides snap shooting. Mr. Taylor will find himself in the same predicament as did the bull who tried to stop a railway train, if he continues to sneer at the thousands who use the hand camera.

Yours very respectfully.

J. E. WILSON.

MR. TAYLOR'S REPLY.

DEAR SIR: Thanks for the proof of Mr. Wilson's letter and the offer to print any reply that I may desire to make.

He has strongly misunderstood the object of my article, which I thought at the time of writing and think when again reading it to be as plain as a pikestaff, *viz.*, to dissuade would-be photographers from *beginning* the practice of photography with a hand camera. So far from this being, as he says, contrary to the

teaching of THE AMERICAN AMATEUR PHOTOGRAPHER, it is strictly in keeping with it, the editors having more than once written that it was as foolish to begin photography with a hand camera, as to expect to acquire a knowledge of mathematics without the multiplication table.

The first paragraph of my article should have prevented his, by implication at least, accusing me of "sneering" at or undervaluing the hand camera, especially as he should have seen from the third that I fully realize the fact that to the experienced photographer who knows its possibilities and limitations, it is often of much greater value in the hand than on the stand. Nor is Mr. Wilson less at sea in his suggestion of "a few hundred dollars" as the cost of a stand camera outfit. While it is true that a few hundred dollars will not go far in the purchase of cameras and lenses of large size and fine quality, it is no less true that the practice of photography can be equally well learned with a small and cheap outfit; that, however heterodox it may seem, pictorial photographs, of a certain class of subjects at least, and sufficiently varied for all the purposes of a beginner, in every respect as good may be made on, say, a 5 x 7 outfit, costing \$15 or \$20, as on the one that I most frequently employ, the three items of which, camera, lens and tripod, are listed at \$129.

Yours respectfully,

GEORGE L. TAYLOR.

AMMONIUM PERSULPHATE.

DEAR SIR: I have read with considerable interest the article in the February number of the A. A. P., describing the new reducing agent, ammonium persulphate. As I have had the opportunity to experiment some with this salt during the last few months, I am in position to confirm much of what is said in this article. It is well designated "a discriminating reducing agent," as its action is much more vigorous upon the denser than upon the thinner parts of the negative. I have not yet had the opportunity to try the method suggested, of alternately reducing with the persulphate and Farmer's solution, but as I have found that a dense negative reduced alone with the ammonium salt has a marked tendency to flatness, it would seem that the alternate application of these two reducing agents would produce an effect impossible with either alone. As a reducer for a harsh negative, from which a lantern slide is required, it seems to me to be about all that could be desired. The salt, though called a new agent, I find mentioned in the 1894 American edition of Richter's "Text Book of Inorganic Chemistry." It may be procured of Eimer & Amend, New York.

I inclose prints made from a very contrasty negative before and after reduction.

Yours truly,

C. H. HAMILTON.

[The prints afford striking evidence of the benefit derived from the use of the reducing agent.—ED.]

LENSES.

TAI-KOKU, FORMOSA, JAPAN.

SIR: After a great accumulation of mail matter had been "cornered" for some months, so that I found it impossible to get it sent to this very out-of-the-way place, it at last came to hand. Among other periodicals was your Christmas

number. Actually, the first photographic paper that I had been able to set eyes on for months!

I came to an article headed "A Common Sense Talk About Lenses." I began the reading with some doubts, because it has been my experience that the writer who heads his matter "Common Sense" very often exhibits *uncommon nonsense* to the public. It is not so in this case, however. There is the sense, and it may well claim to be more than common. I can certainly indorse every word of it, with one exception referred to in my last paragraph, and there are some remarks that I should like to emphasize.

Such expressions as "7 x 4 lens," "half-plate lens," "cabinet lens," etc., were bad enough in the old days, when there might be said to be scarcely more than the types "Portrait," "Rapid Rectilinear" and "Single;" but now they should be at once and forever abolished, for even a trace of meaning has ceased to exist.

The one thing of all others that should be mentioned in connection with the covering power of a lens is the diameter of the circle of illumination. Others that may be given with some use are the sizes of plates that can be covered with good definition, using various apertures—a practice that originated in Germany, I think. Even here, however, there is a liability to misunderstanding. There is no such thing as *perfect definition*, and *good* definition cannot possibly be defined. The more conscientious the maker is, or the more modest the more show he makes in his advertisements.

It is perfectly true that the "new lenses" have been a very great boon, but equally true that they have given rise to much bad practice in the hands of unscrupulous dealers, who foist them off on the more ignorant part of the public by selling them as "cabinet lenses," and so forth, just because they can cover the plates mentioned. The ignorance I refer to here is the lack of knowledge that the equivalent focal length of a lens and its relations to the dimensions of the photographs to be taken are, above all other things, the most important to be taken into consideration.

There is a good illustration of what I am trying to explain in the very office in which I write (that of the Administration Department for Formosa). Prices were asked (not through me) for two cameras, each fitted with a double anastigmatic. The sizes of camera were stated, namely 12 x 10 inches and 6½ x 4¾ inches, but the focal lengths of the lenses were not given. The lowest offer was accepted, with the result that the 12 x 10 camera has a lens of only 12 inches focus, that of the 6½ x 4¾ only 6 inches. True, these lenses, of the very highest class, cover the plates better than a rapid rectilinear of much longer focus could, and would be useful as auxiliary or special lenses, but for general work they are not at all what they should be. It is also the fact that they are symmetrical and that, therefore, one-half can be used as a single lens; but then the focus is too long for many kinds of work, and moreover, though the camera will extend sufficiently for all but near subjects, they are very unsteady when so extended.

For all-round work—for the one-lens man—the focal length should be *at least* equal to that of the diagonal of the plate. It is better about 20 per cent. longer.

It is again true that the "picture maker" can, in perhaps nine cases out of ten, make as artistic work with a common single lens, as with the finest of anastigmatics, and the more so, if he will avoid stopping down to "*f/22*," but, rather, using any aperture up to, say, "*f/10*" that is compatible with the necessary approach to depth of focus.

Yet, do not let it be thought for a moment that I wish to run down the "new lenses." They are grand in their perfection, and invaluable for many purposes, but even their good qualities do them some harm. Take an example. Their advantages are particularly great for screen process work, yet not very long ago a periodical, given entirely to process work, had a remark to the following purport. I quote from memory, and the italics are mine: "However good the new anastigmatics may be for some kinds of work, they are not as good as older forms of lens for screen work, *because of the shortness of their focus*. It is impossible to conceive a wilder confusion of ideas than is contained in this statement. To work it out in detail would involve covering pages."

There is only one point concerning which I cannot follow the writer of the article, unless it is intended for a piece of humor. He says, as regarding lenses in general: "Their price, *for some reason unknown to me*, increases with the increase of their focal length." (Italics again mine.) Now, whoever it may be that writes such really good sense about lenses as "A Photographer," ought to know opticians have to charge higher prices for longer focus, which is always accompanied by greater diameter, or he should become a boon to all photographic mankind by turning out long-focus lenses at the common prices of short-focus ones. I remain, sir,

Yours, etc.,

W. K. BURTON.

Society News.

[Secretaries of camera clubs, of photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tioga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

THE CAMERA CLUB OF NEW YORK.

The Camera Club of New York held its annual auction sale of old apparatus, plates, etc., on March 3, and, it is said, was as successful as usual.

The regular monthly meeting of the club was held on Tuesday evening, March 14, and was given up almost exclusively to the consideration and adoption of new amendments to the constitution and by-laws. Some of the important changes in the constitution are that no applicant shall be considered as a non-resident, or eligible to that class, unless they actually live beyond a distance of thirty miles from New York City Hall. The active membership of the club is limited to 250 members, and life members to thirty. The entrance fee of \$15 is to be raised to \$25 after the 250 limit is reached, and the cost of a life membership is raised from \$100 to \$200. There are to be ten trustees, instead of nine, and six are to be elected in April, 1899, two to serve one year, two for two years, and two for three years.

A new "Committee on Scientific Research" is authorized. There are at present 191 active members and seventy-five non-resident members.

The judges on the competitive lantern slide cup competition, Alfred Stieglitz and Walter Woodbury, read a report of the awards; there were five competitors, and the general average was low, and stood in the following order: Charles I. Berg, 69.4; J. Bebee, 62.16; Mr. Scott, 50.83; Mr. Preston, 48.59; Mr. Agnew, 49.16;

so Mr. Charles I. Berg was awarded the cup, and his name was ordered to be engraved thereon.

An exhibition of prints by William D. Murphy, president of the club, occurred from March 15 to March 31, consisting mostly of landscape work, and was of very excellent quality.

The chairman of the Print Committee, Mr. Charles I. Berg, gave notice of a special **Members' Exhibition** of prints, to be as comprehensive and representative as possible, which is to remain on the walls of the club during the summer months. The date for the closing of entries is May 15, and the exhibition is to open on May 22.

On Wednesday evening, March 15, Mr. H. Snowden Ward, of London, exhibited a number of lantern slides, by Mr. E. Dockree, Frederick H. Evans, Denis Midland, Charles Reid and W. Thomas, all of which were very much enjoyed.

MINNEAPOLIS CAMERA CLUB.

This club inaugurated its new premises by an exhibition of Interchange slides, the Syracuse and Newark sets, which were received with much applause by a crowded house. The new rooms will be a great acquisition to the club, and comfort to the members, the numbers of which are constantly on the increase. Since our last notice they have had demonstrations on posing and flashlight work, some really fine results of which appeared in the *Minneapolis Journal*, and the printing of velox paper. Some idea of the extent of those demonstrations may be formed from the fact that, on the velox evening, six dozen 8 x 10 prints were made. We congratulate Minneapolians on the energy displayed in carrying on the educational features of the club.

THE SYRACUSE CAMERA CLUB.

We have to thank the secretary of this club for an invitation to visit the competitive exhibition, now open at 302 University Block, and for a copy of the catalogue. From it we gather that the 739 exhibits are divided into twelve classes, including Portrait and Figure Studies, Landscapes, Marines, Genre, Snow Scenes, Animal Studies, Fruits and Flowers, Architecture and Interiors, Hand Camera Work, Prints on any subject by members not having used a camera over two years; Historical and Local pictures, and Prints on any subject by ladies. There are also a number of exhibits not for competition.

The prizes, of which there are two in each class, consist mainly of apparatus and material, and—other societies please take the hint—they are all, without exception, “donated” by manufacturers and dealers.

The Syracuse Club was wont to be well to the front in lantern-slide making, and, therefore, we are somewhat surprised that slides are not included in the classes of exhibits, but the fact that the members have been able to muster 739 prints shows that they are not idlers.

PROVIDENCE CAMERA CLUB.

From this club also comes an invitation to attend the opening reception of the eleventh annual exhibition, to be held on March 21 to 26. We are glad to see that those club exhibitions are becoming general, and we cannot conceive anything more likely to benefit the members than the appointment of an artist of recognized ability and freedom from fads to, in their presence, give a fairly exhaustive criticism of the whole of the prints.

MOBILE (ALA.) CAMERA CLUB.

We are informed that this club will hold a competitive exhibition of the work of the members on March 23 and 24, and hope to give some account of it in our next issue.

Answers to Correspondents.

[Communications for the editors, pictures for criticism, and apparatus and material for examination, should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*

A. E. MERGENTHALER.—We know of no means by which the disagreeable action of metol on those subject to it can be prevented, but Tolidol, at least in the form of "velox tubes," prepared by the Haller-Kemper Co., of Chicago, answers the purpose admirably, and although we have used it largely and know of its being largely used, it has not, so far as we know, affected the fingers in any way.

C. A. W.—The article on "Clouds," on page 8 of our January number, and the back numbers therein referred to, will give you the required information. "Pictorial Effect in Photography," by H. P. Robinson, to be got from our publishers.

D. L. EARNEST.—The preparation of a table showing the comparative rapidity of the various plates on the market would be rather a big order, especially as there is no reliable or recognized standard. The nearest approach to anything of the kind is to be found in "The Plate Speeds," furnished with Wynn's Exposure Meter, and which may be procured from Messrs. Anthony & Co., New York.

OWEN MIDDLETON.—The rectilinear is an excellent lens for all-round work, including landscape. Yours of 6½-inch focus should not be employed, unless under exceptional circumstances, on a plate larger than 4¼ x 3¼. For pictorial work, the focal length of the lens is the most, or, at least, a very important feature, and for your 7 x 5 plate it should not be less than 9½ inches, and 14 inches would be better. If, however, your aim is simply landscape, and you have sense enough not to care for snapping, a single lens of suitable focal length will answer your purpose perfectly, and cost less than a fourth of what you would have to pay for a suitable rectilinear.

C. W. MATHEWS.—The combined bath referred to is equally suitable for all varieties of printing out silver paper. The platinum toning solution *may* be employed afterwards, but for platinum toning we should prefer prints that had been simply fixed in a plain solution of hypo.

F. L. WILSON.—The reproduced "architectural study," to which you refer, is simply what it professes to be, and has no claim to be a picture. It is, however, very much better than your photograph of the same subject, for three reasons, (a) a better point of view, showing the turretted dome behind, and giving a more picturesque appearance to the whole; (b) because of the exclusion of the less important matter on the right, and the consequent concentration of attention on the more important parts, and (c), and most important of all, because of its much truer values. Upon shorter exposure, and probably development with a solution stronger in reducer, has in development resulted in making the sky and lighted sides of the building opaque, and giving in the print simply white where no white should be; and, failing to convey, as the other does, the impression of the age or state of hoary antiquity. To bring your work up to the standard of the other, you must

examine your subject from all possible points of view, and select the best; study the beauty of simplicity, and exclude everything not essential to the composition, and by correct exposure and suitable development, secure correct, or as nearly as possible, correct values; making sure of this, that no negative that reproduces a purely white sky is worth printing from, at least, without modification.

J. F. SMITH.—We should like to see all of our Portfolio pictures that we mark for reproduction reproduced quickly, but there are financial reasons why, after having so marked them, we should leave the rest to our publishers. Kindly remember also that the object of "Our Portfolio" is not so much the gratification of those of our readers who can do good work, as to be helpful to those not so far up the tree, and that that is often better accomplished by reproducing prints with faults, and showing how to cure them, than by the reproduction of faultless pictures. Please, in future, when referring to prints that have been noticed, mention their numbers, rather than their titles. The former always tells us where to find them; the latter, never.

LUCY CARTWRIGHT.—It is all right enough to tell careless people to employ separate dishes for each of the various operations, but the careful may with safety make one do duty for all. We employ the same tank for developing, fixing and washing. If the latter operation has been sufficient to free the plates from hypo the tank will be sufficiently clean for development. Send a stamped and addressed envelope, and we shall advise you privately regarding the lens.

PUZZLED.—Would it not be better for you to take the trouble, and only a very little trouble is necessary, to learn how to use the symbols, than that we should discontinue their use? Especially, as by them, we are sometimes able to give more and more accurate information in a line than could be conveyed by ordinary language in half a page. Photography is essentially a chemical operation, and, however practically successful you may be, unless you have an elementary knowledge of that beautiful science, you cannot be said to have a knowledge of photography.

W. L. LAWSON.—You cannot make large heads free from the apparent exaggeration complained of, in your fifteen-foot studio, because you cannot employ a lens of long enough focus. With your nine-inch lens make the heads on, say, a quarter plate, and enlarge to the desired extent. The best way is to make a positive on carbon by contact, and from that make the enlarged negative on a slow plate. The specimen sent is promising enough to warrant our saying that you will make your mark, but be sure that while straining after individuality you steer clear of eccentricity.

RICHARD W. WALLACE.—No, we do not advocate separate classes in competitive exhibitions for amateurs and professionals. If you, who can choose both subject and treatment, cannot meet on his own ground the professional who has to please his customers, you had better devote your attention to some other branch of photography.

V. K.—The beautiful little picture is on a collodion paper, and the fault complained of is the peeling off of the film. This is an occasional, but not frequent, occurrence, a fault of the paper, for which the only remedy we know is to change the sample. We cannot, without seeing the negative, tell you the cause of the mottling referred to. If it is in the deposit, not the gelatine, it is probably caused by insufficient rocking of the tray during development; if in the gelatine, soaking it in a solution of alum after development and before fixing, will prevent it. The plate must be well washed after the alum and before fixing.

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For Sale—A B Daylight Kodak, made by the Eastman Co. It is in good condition, holds film of 24 exposures, makes pictures $3\frac{1}{2} \times 3\frac{1}{2}$. Purchase price was \$15.00; will sell for \$6.00; sent C. O. D. Rev. H. S. Lawrence, Van Wert.

For Sale— $6\frac{1}{2} \times 8\frac{1}{2}$ Monitor camera, fitted with No. 4 Series III. Goerz Double Anas. lens and Bausch & Lomb Dia. Shutter. No. 3 Zeiss Series V. wide angle lens, 6 holders, 4 printing frames, tripod and 2 very fine carrying cases. Also, 11 in. Acme Burnisher; all the above in A-1 condition. John M. Shuler, Oswego, N. Y.

For Sale—Special made enlarging camera of tin; size, $2\frac{1}{2}$ ft. long, 2 ft. high, 8 in. wide, fitted with 6 in. bull's eye condensing glass, negative holder, lamp, etc.; cost \$12.00; will sell for \$6.50. Also, special made lens (Scovill-Adams Co.) for enlarging purposes; cost \$10.00; will sell for \$7.50. The complete outfit, as above, 3 developing pans 18×14 in. each, graduate, red glass lamp and printing frame, are yours at \$15 cash. This outfit has paid for itself many times, as I have made beautiful life-size heads from 4×5 negatives, and done the work home evenings on bromide paper. Address C. B., P. O. Box 173, New York.

For Sale—A No. 1 Kodak, one of the original form with shutter revolving about the lens, with carrying case, very slightly rubbed, otherwise in perfect order; cost \$25; will sell for \$10, or exchange for 1899 model Folding Pocket Kodak and carrying case in good order. Wm. Stowe Devol, Redlands, Cal.

For Sale—A fine imported Magic Lantern; has 4 in. condensers, a $\frac{1}{4}$ size French Achromatic Objective, and a powerful 3-wick lamp; all as good as new and cheap. Also, a 5×7 Henry Clay camera with Zeiss II. A 5×8 lens and B. & L. Shutter; and a Premier 4×5 with Beck lens. V., 201 Lennox Road, Brooklyn, N. Y.

Wanted—Good R. R. lens of $13\frac{1}{4}$ or 14 in. focus, fitted with Bausch & Lomb Diaphragm Shutter, all in first-class order. Also, for sale a 5×7 Premo, Sr., folding hand camera, Victor R. R. lens and B. & L. Shutter, 3 plate holders, light tripod; list \$45; sell for \$30. C. G. Moore, Lock Box 3, Lisbon, O.

For Sale—A 4×7 Pony Premo, Sr. camera with carrying case, Rapid Rectilinear Lens, Victor Shutter, Bausch & Lomb Ray Filter and 6 double plate holders; all in first-class condition. Cost \$47.75; will sell for \$32.50 cash. Address W. E. Cogswell, Box 463, Sacramento, Cal.

For Sale—One 4×5 Rochester Optical Co. Handy camera, with 2 double plate holders, all in good condition; cost \$9; will sell for \$5. Also, one 4×5 Magazine Cyclone camera, nearly new; cost \$10; will sell for \$6.50. Address E. C. Dymond, Libertyville, Ill.

For Exchange—A 12×15 Laverne Achromatic lens, good for studio and outdoor work; also, a 11×14 single landscape Darlot lens, both in good condition, to exchange for a good and complete 5×7 outfit. Address Morris S. Heagy, Rock Island, Ill.

For Sale— 5×7 Rochester Rapid Symmetrical lens, $8\frac{1}{4}$ in. focus, fitted with Unicum Shutter, with focusing scale and bulb, new this spring and never used; cost \$24; sell for \$12; send on trial; will exchange for 8×10 lens or box. Address W. J. Yeager, Salem, Col. Co., O.

For Sale—A new 4×5 outfit, never used; one 4×5 Premo Pony A lens, Goerz No. 2, Series No. 3, with Goerz section Shutter, 5 plate holders and carrying case; cost \$92; sell for \$50; or exchange for anything of value. H. D. Barton, 21 Third street, Rochester, N. Y.

Wanted to Exchange—A B^b Clarinet, nearly new and in perfect order, and an Adlake camera in perfect order, for a good double lens, or offers. Address R. L. Davidson, La Junta, Colo.

Wanted—Dallmeyer or other good portrait or Rapid Rectilinear lens, $6\frac{1}{2} \times 8\frac{1}{2}$ or larger; name lowest figure. G. T. Atkinson, 237 La Salle st., Chicago.

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No. 372.

By Frank R. Miller.

"THE AMATEUR MUSICIAN."

THE
AMERICAN AMATEUR PHOTOGRAPHER.

VOL. XI

MAY, 1899.

No. 5.

The Lens Question.



No. 317.

By Harold C. Rising.

THE lens question is of such vital importance that no apology is needed for our returning to it again, although there has not for months been a number in which we have not had something to say about one or the other of its features.

We may take it for granted that now picture makers generally recognize the fact that there are serious objections to the employment for landscape or other pictorial purposes of lenses of a focal length shorter than once and a half the length of the base line of the picture; *i. e.*, that shall not include an angle greater than 38° ; and it may be equally taken for granted that, in view of so much having been said about the lens being the most important element of the photographic outfit, they want the very best lens they can get, and it is just here they encounter their first difficulty.

Knowing that the modern anastigmat is a far more perfect instrument than any of its predecessors, the photographer naturally desires to possess it, but if he be a man of but moderate means the price is prohibitive, those suitable for pictures of, say, $8\frac{1}{2} \times 6\frac{1}{2}$, being listed at from \$84 to \$100.

But while the anastigmat is highly creditable to the optician and a boon to the scientist and the "process" worker; for general pictorial work it possesses no real advantage over the cheaper rectilinear, nor, for some



No. 282.

By J. W. Anderson, M.D.

"COUNTRY ROAD NEAR HAMILTON, LONDON CO., VA."

kinds of it, over the very much cheaper single lens. We have often said that for most varieties of landscape work the single lens is in every respect suitable, and, for some purposes, better than the rectilinear, just as the rectilinear is, for some purposes, better than the anastigmat; but at the same time freely admit that a doublet is a desirable acquisition; and this brings us to the real object of this article—the introduction to our readers of what may be called the Poor Man's Lens.

To Mr. G. Gennert, of New York, we are indebted for an opportunity of examining and thoroughly testing the lens to which we have given the above title, and we may say at once that it possesses in a high degree *all* the features essential to the highest class of pictorial work. It is the Seraph, and comes in the form of a beautifully finished morocco case in which are nestled four single lenses, varying in length of focus from about six to eighteen inches; and a finely finished mount with iris diaphragm and removable ring for wide angle work; giving to the photographer in singles and doublets or rectilinears, actually the power of sixteen different lenses, and enabling him to make a picture on even a 12x10 plate with an angle as small as 38°, which we have assumed as the widest desirable; and all that at a cost of only \$25.

While from the point of view of the optician, the scientist and the "process" worker the "Poor Man's Lens" is far from as perfect as the modern anastigmat, it possesses, as we have already said, all the features essential to pictorial photography. The lenses are perfectly achromatic, with perfect coincidence of the chemical and visual foci, are correctly centered, and in combinations perfectly rectilinear. In a word, the Seraph possesses all the qualities found in the best class of lenses previous to the advent of the anastigmat, and is capable of, in the hands of a capable photographer, giving the very highest class of pictorial photography.

WHAT a lucky man the president of the Scranton Camera Club must be! He writes that "144 exposures made in all kinds of weather, on a bicycle, resulted in 141 perfect negatives," a broken plate, a blank plate, and a double exposure accounting for the other three. I should like to see his negatives. It may be that different people have different ideas as to what constitutes a *perfect* negative.



By Frank Roselle.

"THE FARMYARD."

One of a series of pictures awarded first prize, Class II., AMERICAN AMATEUR PHOTOGRAPHER
Beginners' Print Competition.

The Paper Trust.

BY HARRY RUSSELL.



No. 355.

By E. A. Donnelly.

"SPEAK."

THE AMERICAN AMATEUR PHOTOGRAPHER seems to have taken no notice of the alleged paper combine, and I suppose it is as well that it should have nothing to do with the commercial phase of photography. But that need not prevent me from, in my own name and in the name of all that are likely to suffer, protesting against an artificial raising of the price of what is now almost a necessity. It is no doubt true that the additional cost will not be much, but "every little makes a mickle," and with

most of us it is all outgo and no income, and so we must look carefully to every cent.

There is, however, one consolation; the members of the trust may leap over, instead of on, the saddle, and so outwit themselves. They may unintentionally be doing the very best thing for the amateur photographer that has ever yet been done; may induce him to take to carbon, the very best of all, and the simplest of all printing methods. Time was when there was in this country a belief that carbon could not be wrought because of the heat, but with formaline and other well known aids it can now be wrought as easily and as certainly as any other printing method. One great difference between carbon and all silver printing methods is that the former is purely mechanical, while the latter is almost altogether chemical, requiring for its successful operation paper of perfect purity and suitable size. Hitherto this has been made by only a few mills on the Continent, and so combination has been easy.

Carbon, on the other hand, may be made on any paper that is tough enough to bear the necessary handling in warm water, and could be made in this country as well as anywhere else. If, therefore, the combine should have the effect of sending amateurs generally to carbon it will have done a good turn for which they should be forever grateful.



"A MIDSUMMER DAY."

BY

FREDERICK L SMITH.

**One of a series of pictures awarded second prize, Class II., AMERICAN AMATEUR PHOTOGRAPHER
Beginners' Print Competition.**

Only two things have hitherto prevented carbon from taking the place to which it is so justly entitled, prejudice, and the reversal of the image. For the former there is no ground, as it is really the simplest of all methods, perfect prints being made by any average photographer after a very few trials. So far as the latter is concerned, it would seem as if in anticipation of the coming popularity of carbon, the advantages of exposing through the glass were being discovered, several of the best authorities asserting that freedom from halation is better secured by that means than by any other.

I could sing the praises of carbon over much more space than the editor will give me, but in view of what I know of the blue pencil, will conclude by recommending the reader to study carefully my article on "Pigment Printing in Suitable Colors," on page 539 of the December number.

A GERMAN trial for swindling with forged autographs of Martin Luther brought out the fact that the ink used by Luther 350 years ago is so good that copies can still be taken from it.



No. 386.

By Helen L. Griswold.

"STUDY."



"ISLAND CREEK."

By Henry Popp.

Timely Hints.

BY GEORGE L. TAYLOR.

ALTHOUGH the true amateur finds food for the camera all the year round, there are many well worthy of the name who lay photography aside with the departure of the robin, and resume it only when his welcome voice is again heard. To those, or to some of them, a few words of advice may not be out of place.

The camera that has been laid aside during the winter needs careful consideration. The bellows, generally made of "split skin," is apt to dry, and if roughly extended, apt to crack. The camera should be slowly extended to its utmost, thoroughly dusted and cleaned outside and in, and the bellows gently rubbed all over with a cloth well moistened with castor oil. Bellows with leather inside should be rubbed both inside and out; those with cloth inside only on the outside. This should be repeated daily three or four times, and finally gone over with a soft dry cloth. This treatment, repeated once a year, will more than treble the life of an ordinary bellows; indeed, I have one that has been annually so treated, and although made by Meagher in 1873, and been in almost daily use, and almost all over the world, it has never needed a patch or repair and is as light-tight now as then.

The camera should next be carefully examined for leaks, as a leak that with wet collodion would have been of no importance would ruin a modern rapid dry plate. This may be most conveniently done by removing the focusing screen, screwing the capped lens into its place, and wrapping the head and camera together with a perfectly opaque focusing, or other cloth, taking care that only the back, and no part of the bellows is covered. Out in the bright sunlight both person and camera should be turned round and round so as to expose every part to its piercing rays; and, satisfied that there are no leaks, or having stopped such as may have been found, the cap should be replaced by the shutter and the examination repeated.

The plate holders also require careful attention. Where the hinges are of leather they should be oiled, and the stops of those in which the slides draw entirely out should be seen to be in order, as from dust or other cause they frequently refuse to act.

The lens, if properly put away, should need nothing, and the less that is needed the better, but if dull or dusty it may be gently, very gently rubbed with a circular motion with an old soft silk handkerchief on which has been placed a few drops of alcohol, or weak ammonia.

Leather covered cameras may have scratches or rubbed parts concealed by a touch with well beaten albumen into which has been rubbed with a palette knife a little aniline black, or if much weatherworn, may be restored to their pristine state by a coat of varnish made by diluting spirit varnish with an equal quantity of alcohol, and adding sufficient of the aniline black to give the desired color.

The dark room also requires attention. A thorough cleaning out and dusting of every corner, and the emptying of every bottle, even of those solutions that "keep indefinitely." Nothing should be here that is not actually in use; and the working season should be begun by making up the several stock solutions, and as few of them as possible, as "the beauty of simplicity" obtains in manipulation as well as in composition; and they should be, as far as possible, solutions of 10 per cent. as the most convenient of all strengths.

Solutions naturally suggest labels, and induce me to say that probably more material is wasted by being put and left in unlabeled bottles than is actually employed in development. Bottles with solutions for temporary use should have large plain blank labels on which pencil marking may be done and a line drawn through it when one solution is changed for another.

Bottles for stock solutions should have permanent labels, made so by first a coat of paste or other size, and then a coat of copal or other



"A PATHWAY IN THE WOODS."

**BY
FREDERICK L. SMITH**

**One of a series of prints awarded second prize, Class II., AMERICAN AMATEUR PHOTOGRAPHER
Beginners' Print Competition.**



No. 192.

By John Bonfield.

"A GLIMPSE OF NIAGARA."

suitable varnish; and it should be an inflexible rule never to have in the dark room a bottle without a label.

There's just one thing more I should like to say, and that only to those who mean to aim at pictures rather than mere photographs. The beginning of the season, like the year, is the time for good resolutions; the best resolution you can make is this: No matter how many plates you may take to the field, never under any circum-

stances expose one on a subject that you are not in every way perfectly satisfied with.

Convention Duties.

BY GEORGE B. SPERRY.

WHEN the bromide patent was abroad in the land and the process monger was waxing rich, the poor duped photographer changed his collodion formula as often as he had the opportunity (and the means) to buy the latest secret one of some noted operator. His competitors were his enemies from force of habit. As each believed the other's success due to a better process the estrangement was not easily broken. With the organization of the old N. P. A. these restrictions began to give way. In technical qualities more especially, photography advanced rapidly. It was soon learned that what one gave to his fellows came back ten fold. Exchange of ideas suggested new ones. The occupation of the process monger was gone. The civilities of the day were exchanged among competitors in place of the stony stare of former days. The dry plate worker of

recent date can never fully realize the petty jealousies and the bickerings of the old wet plate men. It took some time to pierce his crust, but when he was touched he gave all he had. The life of the old society was not in vain. The marvelous growth of photography is largely due to these early conventions. They furnished the feast which the journals soon spread.

The influence of the convention is far reaching. Not a photographer in the land, though he never attended one or sent an exhibit, but is the better for their existence. While admitting that all are under obligations to the association and should feel it their duty to help sustain it, we are not going to ask you to come to the meetings or prepare an exhibit because of that obligation. The personal benefits are so great that should these not appeal to you it would be useless to appeal to your sense of duty. As a matter of practical education, the school of photography conducted by the American Aristotype Co. is one of the most important features of the convention. Its corps of instructors is the best obtainable. The value of seeing a photographic manipulation is too well known to need any argument in its favor.

The Art Annex is a school of infinite variety, in which he learns the most who sees the most. Prof. Lorado Taft, of Chicago, one of the best known art educators of the country, will give an art lecture illustrated by lantern slides. Mr. Hollinger, of New York, will give one of his characteristic talks on "How to Get Good Prices."

Lake Chautauqua is the ideal spot for an outing trip. For any information in regard to transportation, hotels, or for entry blanks, prize lists, etc., apply to George B. Sperry, 319 Summit Street, Toledo, Ohio.



No. 294

By Dr. J. Y. Simpson.

"A WINTER MORNING."

A Few Notes on Velox.

BY OSCAR B. WARREN.

WHAT has been said in previous numbers of this journal concerning the use of Velox has induced the writer to add a few notes of his experience with this very useful paper.

Two years ago the old "Carbon Velox" was tried and was found to be so easy to work that I at once selected it as the best paper for strictly black and white work. Since this time the new "Carbon," "Special Portrait" and "Glossy" have been used, all of which have proven very satisfactory, when used with the negatives most suited to each. A portion of the old "Carbon Velox" was kept for over a year without more than ordinary care and the last sheet worked as well as the first, thus proving its excellent keeping qualities.

The instructions accompanying each package of Velox are so clear and full that no one need err if proper attention is given to every detail. I would emphasize that the loading and unloading of the printing frames and the development of "Special Portrait Velox" should all be done in weak light, as this paper is more sensitive than carbon or the glossy grades, and if not properly handled is apt to show slight grayness in the high lights.

Many imperfections noticed in finished prints, especially the small dots and streaks, are often due to using a developer which contains small undissolved particles or other sediment. To avoid this the developer, when made up direct from the powder, should be filtered before use, also old developers should be very carefully filtered before using them again.

As at times I had often found it necessary to make up a developer on very short notice and being one of those who believe in compounding their own solutions as a cheaper and more satisfactory way than buying those ready mixed, I adapted the metol quinol formula as given in the Velox directions, to the use of solutions made by hydrometer test, and this formula has proven so much better than that in which the powdered materials are used, that I will give it here.

As it is not necessary to weigh materials for solutions made with hydrometer test, I have found it cheaper, better and more convenient to use my sulphite and carbonate of soda in the dried form, preferring "Mallinckrodt's" to all others. Ice water, boiled to destroy the organic matter and afterwards filtered, is as good as distilled water for these solutions and should be used when it can conveniently be obtained. One quart of a solution of sulphite of soda is made up to test sixty degrees, and after filter-



"A BIT OF KENTUCKY TURNPIKE."
BY
GEORGE A. CUSTER.

No. 316.

ing is placed in a glass stoppered brown or orange bottle. Two quarts of a solution of carbonate of soda is made up to test forty degrees, and after filtering is placed in any clean, convenient receptacle with a good rubber stopper, a small jug answering the purpose as well as a bottle. As it is necessary to use warm water when dissolving dried sodas, the solution should be allowed to cool before testing with hydrometer. These solutions will keep fresh and clear for an indefinite time and will be available for instant use, solutions made with them not having to be filtered before use. My developer is made in ten-ounce size as follows:

Dissolve metol, 7 grains, in clear pure ice water $2\frac{1}{2}$ ozs., add soda sulphite, to test 60 degrees, $2\frac{1}{2}$ ozs., in this thoroughly dissolve hydroquinone, 30 grains; after solution is perfectly clear add soda carbonate, to test 40 degrees, 5 ozs. Then add from a 10% solution bromide potassium, from 6 to 10 drops.

As Glossy, Carbon and Special Portrait Velox require solutions of different strengths and with different amounts of bromide of potassium, I only develop the Glossy in fresh, concentrated developer with just enough bromide of potassium to insure pure whites. Carbon Velox can stand more bromide and slightly weaker developer, while Special Portrait works better in a still more diluted developer with more bromide. When con-



No 400.

By Ed. Ilch.

"WAITING."



"THE VILLAGE BLACKSMITH."
BY
J. WILL PALMER.

No. 391.



By R. C. Leonard.

"WOODBURY FALLS."

venient, I start out with Glossy and after adding a little more bromide, follow with Carbon, then either use Special Portrait the same evening or reserve this solution for another time, and after adding more bromide, develop Special Portrait in this old developer. After this solution is too weak for the Special Portrait, it can be reserved for over exposed dry plates. It is best preserved after filtering, in five ounce bottles filled to the neck, properly labelled and placed in the dark. Over exposed plates developed with this developer make excellent negatives for printing with Special Portrait Velox.

It is always best to do Velox printing by artificial light of known strength. As at times I find the proper time for each negative with each different variety of Velox, this time is noted on my negative preservers, giving the distance from the light at which the printing was done, etc.

When using Special Portrait Velox, the best way I have found to print in clouds which are too dense to be properly printed if the whole negative is given the same time, is to trace the outline of the sky line on a piece of tissue paper, after which this paper is pasted on a piece of pasteboard and the sky line roughly cut out. By holding this between the light and the negative and in line with the original sky line, the sky and clouds will

receive the direct light and print up ahead of the thinner portion of the negative; by giving the pasteboard cut-out a slight motion to and from the negative the tendency to show a sky line on the print will be removed. After the clouds have had sufficient time the obstruction can be removed and the whole negative given the proper time.

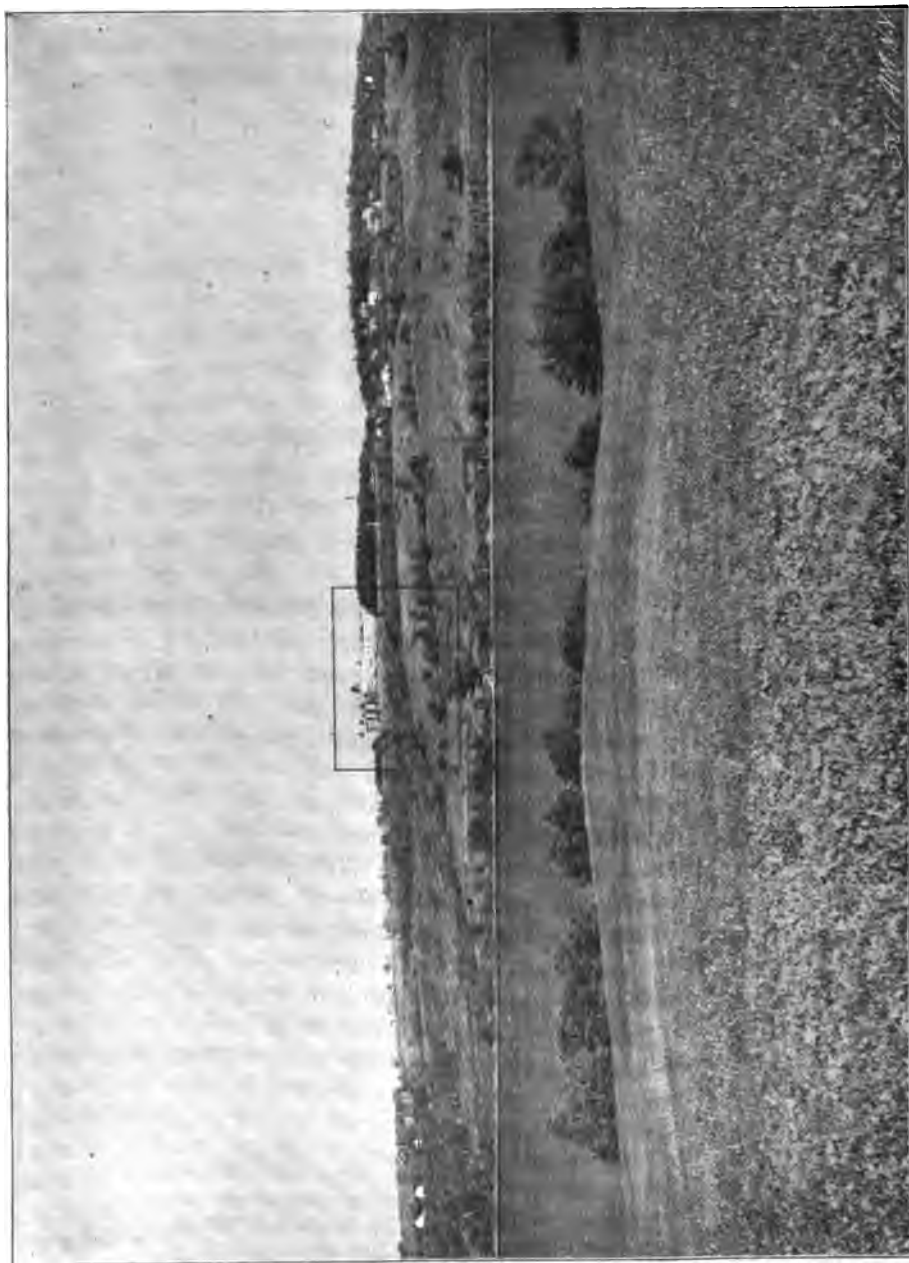
One great advantage of Velox over other papers I have used is, that it is possible to wash properly fixed prints in water which would stain such excellent papers as Vera Matte, Aristo Platino, the different gelatine papers, including Nepera and Rex, etc. The water I use contains so much iron that I am unable to use it for washing any other papers except Velox, and yet I have never had a Velox print fade or discolor. I mention this last note hoping some struggling amateur who has been unable to produce permanent prints, owing to the water used in their preparations being contaminated with iron, may try Velox and learn how easily and satisfactorily it works.

Telephotography.

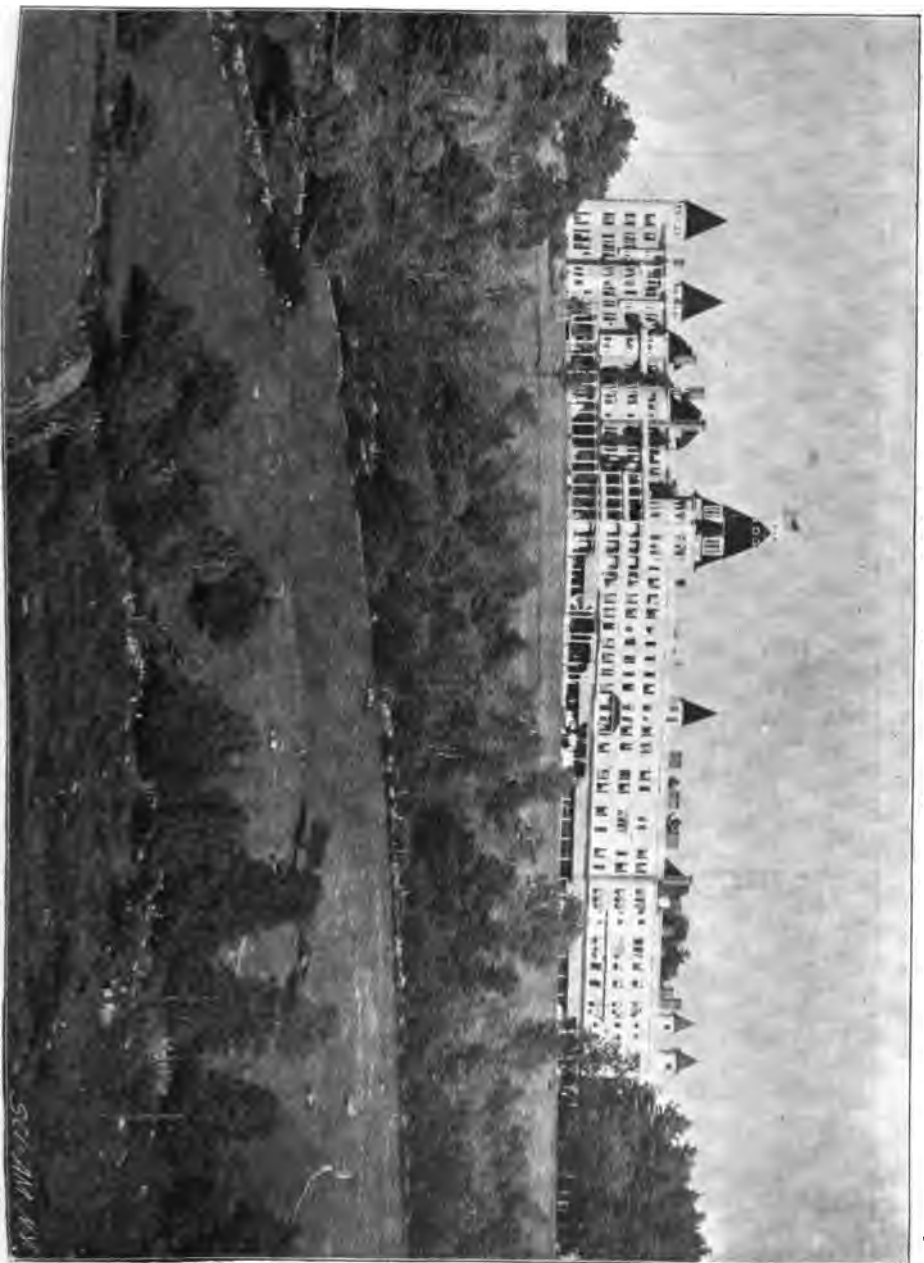
THE introduction of the telephotographic lens has given to photographers a new power, valuable apparently in a ratio inverse to the degree of their appreciation of it, or the extent of its employment; as it is equal to a whole battery of lenses ranging in focal length from the length of its positive objective to that of any ordinary telescope; or in other words, it gives to the photographer the power of photographing anything at any distance to any desired size.

This power is well illustrated by the two views annexed. The more extensive one was taken on an 8 x 10 plate by an ordinary rectilinear lens of probably 12 in. or 14 in. focus, at a distance of about two miles from the hotel enclosed within the parallelogram, and the other from the same spot with the tele attachment. For such enlargement, between seven and eight diameters, the plate must be over 40 inches from the lens, about twice the draw of the average 8 x 10 camera, necessitating an extension as shown by the cut, the second tripod being necessary to prevent vibration, the least trace of which would be fatal to sharpness. For lesser magnification, say, from three to five diameters, the ordinary camera and a single tripod will be sufficient; and we are quite sure that whoever gives the telephoto lens a fair trial will never afterwards feel properly equipped for work in the field without one.

Why, it may be asked, if the telephoto lens be such a power, has it been so neglected; or is possessed by so few? But the cause is easily found.



A HOTEL IN MAINE PHOTOGRAPHED WITH RECTILINEAR.



PHOTOGRAPH OF SAME BUILDING FROM SAME POINT WITH TELEPHOTO ATTACHMENT. DISTANCE NEARLY TWO MILES.

At its introduction great stress was laid on its applicability to long distance work, while little or nothing was said of the fact that it is equally suitable for ordinary purposes ; for the photographing of objects that while

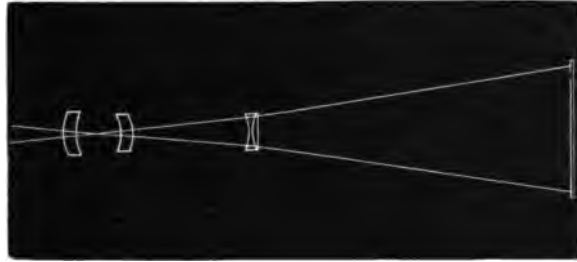
comparatively near, yet could not, for various reasons, be approached near enough for reproduction to some desired size; and it is just for such cases that it will be found most generally useful.

Who has not seen a group of cattle in a field with such surroundings as would give a charming picture, but found them scatter in all directions as he approached the necessary point of view; or has not had to abandon the idea of photographing some picturesque home standing on an elevated situation because at the only distance permitted by his lenses he had to look up to it from so much below as to make it impracticable? By means of the telephoto lens the cattle could have been photographed without disturbance, and from the nearest eminence the home secured as desired.



CAMERA WITH TELEPHOTO ATTACHMENT, ADJUSTED TO MAGNIFY SEVEN TIMES.

The simplicity of the telephoto lens will be understood from the small cut showing the path of the rays. Leaving the positive objective in a divergent form, they are taken up and made still more divergent by the am-

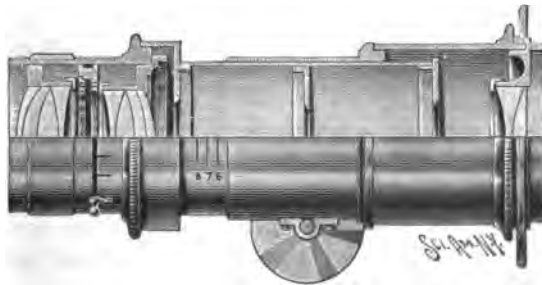


COURSE OF THE RAYS THROUGH THE TELEPHOTO

plifier, which is an achromatic negative lens, and the point at which they come to a focus is dependent on the distance between it and the objective, the closer together the greater the magnification, so that practically the only limit to the degree of enlargement is the length of the camera, or the available distance between the focusing screen and the lens.

The nifty amateur may apply the telephoto attachment to his own rectilinear or portrait lens at a cost of little more than the price of the negative lens, but he that can afford it had better employ the optician, or, better still, purchase the lens complete as now on the market. The cut represents such a lens, as made by Bausch and Lomb, with a Zeiss objective; a very desirable thing, as the imperfections of an imperfect objective are increased by the amplifier. The negative lens is fixed in the flanged end of a barrel in which slides an inner tube, moved by rack and pinion, threaded to receive the objective, and has a scale indicating the exact amount of magnification.

The telephoto lens, like most things, has ways of its own, and differs from other lenses sufficiently to make its study and practice desirable; but when they are mastered and all its possibilities understood, it will be one of the most highly valued and most frequently employed instruments in the up-to-date photographer's outfit. *We are indebted to the Scientific American for the use of the blocks.*



PHOTOGRAPHIC LENS WITH TELEPHOTO ATTACHMENT.

The Convention of the P. A. of A.

TO THE PHOTOGRAPHERS OF AMERICA:

I would respectfully call attention to our next annual convention, to be held at Celeron, from July 17th and 22nd inclusive. The executive board having held session and passed upon the many difficult problems arising, to the best of their judgment with equal fairness to all, call upon you for your indorsement, your exhibits and, above all, your attendance to assist in making this, our nineteenth annual convention, a grand one.

Don't sit in your studio, feeling satisfied with your efforts, but come out and join us and spend a week at one of the most beautiful spots in America, studying the exhibits gathered from all sections of the country and exchanging ideas with the many new acquaintances you will make. You will find them the most progressive, energetic and most social set of gentlemen you have ever met. Let your appointments await your return and, when with us, lend us your aid in preparing for an ideal convention for 1900.

Our association should be the pride and have the support of every photographer in the land. Let's stir ourselves, take more interest in our association and contribute our mite to its sustenance, attend our meetings occasionally and not depend wholly on our journals to place before us the benefits and advancements our conventions alone make possible. Join with us this year in the hustle for artistic progress and you will return home enthused, feeling that you have enjoyed a week of profit and pleasure that you could ill afford to have missed.

Our membership fees are only \$3.00, annual dues \$2.00 and the treasurer is now ready to receive the same.

Yours very truly,

GEORGE W. VARNEY,
Pres. P. A. of A.

3937 Drexel Boulevard, Chicago.

The Philadelphia Salon of 1899.

THE success of the previous joint effort of the Pennsylvania Academy of the Fine Arts and the Photographic Society of Philadelphia has induced them to continue the good work, and we learn from a preliminary notice that the second Philadelphia Photographic Salon will be held in the Academy galleries from October 22 to November 19.

While it is true that American photographers as a whole are still considerably behind those of certain localities in Europe, there have always been a few, and the number is rapidly increasing, whose work is of a very high order, and such exhibitions as the Philadelphia Salon of 1898, the Pittsburg Salon held in February, and that now under notice, are pre-eminently calculated to encourage and stimulate them to higher efforts, draw others into the charmed circle, and give the general public an opportunity of realizing the value of photography as a means of picture making.

The Salon of 1899, as in all similar exhibitions, will aim at showing only such work as in the opinion of the judges gives indication of artistic feeling and individuality; and the only award will be the honor of being hung; and we would urge on those of our readers who have learned to know the difference between a picture and a mere photograph, and have joined the picture-making band, to consider it a duty to submit their work to the judges and support the salon in every way they can.

In the managing committee the Pennsylvania Academy of the Fine Arts is represented by Messrs. Edward H. Coates and Harrison S. Morris; and the Photographic Society of Philadelphia by Messrs. George Vaux, Jr., John G. Bullock, and Robert S. Redfield, who will in due course issue entry forms and circulars containing all necessary information.

The Contribution Box.

TRUE VALUES.

THERE can be no doubt but that how to get "true values" is the most important question of the time, as without that, no matter how perfect otherwise a picture may be, it is out and out condemned. By true values is meant, as I understand it, the proper rendering of light and shade, the correct reproduction of the various degrees of luminosity as reflected from the various objects in the view, and nothing short of sufficient exposure will give that.

Under exposure is the bane of present day photography, and until that is fully realized nine-tenths of all the photographs we see, and even many that find their way into the exhibitions, will be worthless from that cause. Until the force of the old recommendation to "expose for the shadows and leave the lights to take care of themselves" is fully realized and practised the photographs of to-day will be far behind those of, say, twenty years ago.

The sum of the matter is this; a photograph is nothing without true values, and true values can be got only by giving sufficient exposure.

B. W. STANTON.

SNOW PHOTOGRAPHY.

It does not seem to be so well known as it should be that snow scenes can be properly photographed only when the sun is low enough to cast shadows from the irregularities of its surface; and so should be attempted

only early in the morning or late in the afternoon, as most of those that I have seen have been exposed about midday.

In addition to exposure, a snow scene should be developed with a solution weak in reducer, and in the negative only the highest points should be quite opaque.

G. L. SIMPSON.

PICTURE POSTCARDS.

Why is it that "Pictorial Postcards," so popular in Europe, have not caught on here? They have been introduced more than once, but probably not in a sufficiently conveniently or attractive way.

It was as blue prints, I think; and blue prints, or rather blue print paper, will not keep. The process employed must be one requiring the simplest manipulation. "Platni," needing only a dip in warmish water, seems to me to be just the thing. It keeps for a long time, and when too old for development printing it answers as printing out paper.

But till the Platni people turn their attention to postcard pictures, no one need have difficulty in employing blue print solution just as he wants it. Some months ago a correspondent in this journal called attention to the fact that, contrary to the books, blue print solution would keep indefinitely. I made up some at the time and have used it from time to time ever since, and to-day it is quite as good as when first made. With such a solution and a tuft of cotton, the traveler or the stay at home may coat as many cards as he wants and have them dry in an hour.

No doubt there are some who do not like the blue, and it is not the best for all subjects; but there are other colors that may be produced by means equally simple; and when I have experimented with some of them, if the editor will give me leave, I shall be glad to return to the subject.

A. W. LEIGHTON.

[We shall be glad to hear from you as often as you may find it convenient.—EDS.]

Trimming.

WE have frequently shown the necessity for trimming, and expressed our surprise at its being so frequently neglected. Excessive and uninteresting foregrounds, matter at one or other or both sides, not only not helpful but hindering, is the rule rather than the exception, and there is many a photograph that is not worth and does not get a second look, which, if the trimmer were heroically applied could be made an attractive picture; there being, as one of the best recognized authorities on pictorial photography has aptly expressed it, sometimes "a small nugget of gold in a

large mass of clay." Indeed there are few photographs printed the full size of the negative that could not be improved by the judicious application of the trimmer.

Hitherto the knife has been most generally employed, but it has its disadvantages; trouble in keeping the point in good order, cut fingers, prints only partially cut or torn, and prints crooked or off the square. All this may be avoided and accurate trimming made a pleasure instead of a toil by the employment of the rotary trimmer, recently introduced by Andrew J. Lloyd & Co., of Boston; concerning which a well-known photographer says that they are entitled to the thanks of everyone who had prints to trim for the introduction of a machine so effective at so small a cost.

The rotary trimmer is a wheel which runs in a groove and cuts the paper, held squarely and firmly in place by an automatic pressure plate. Its merits are that it cuts surely, closely and perfectly straight, without buckling or other mishap; and will continue to cut for years without sharpening.

Words from the Watch Tower.

BY WATCHMAN.

N^e sutor ultra crepidam is good advice to give to the average newspaper man who amuses us so whenever he attempts to tackle photography, but hardly necessary, one would have thought, for a lecturer on physics and chemistry.

Still, color photography is a kittle subject, and would seem to muddle the heads of even the wisest when they essay to tackle it. In my last batch of "Words" I indulged in a smile at the notions of Mr. Romyn Hitchcock as set forth in a paper before the American Association for the Advancement of Science; and now have to notice the hardly less amusing vagaries of the "lecturer on physics and chemistry" whose "prize paper" on color photography appears in a contemporary.

First we are told that as a result of "having read nearly everything published in English, French and German, relative to the case (the history of photography) he believes that France can justly claim the honor of having been the first to perfect the operation," and this in face of the fact that for more than a quarter of a century there has not been in the practice of photography one vestige of the art as discovered or introduced by the Frenchman, Daguerre; and that the photography of to-day is simply a modification of that discovered by Talbot, and that Talbot's discovery and introduction preceded that of Daguerre.

Equally muddled, apparently, are the lecturer's notions regarding the sensitive film. Speaking of Lippmann's film he says, "the sensitive chemical is *in*, and not *on* it, as is the case of kodaks and cameras," whereas, everybody that knows anything about it knows that the Lippmann film differs from other films only in its greater transparency and freedom from structure. Just what difference he thinks there is between a kodak and a camera I cannot even guess, or how he can know anything about photography and suppose that the silver bromide is *on* and not *in* the film, passes my comprehension. His idea of it seems on a par with his acquaintance with interference photographs, as regarding the latter he gravely tells his readers that "when finished and dried, the picture can be seen in its natural colors, by looking through the film with the mirror back of it." Well, perhaps they *could*, but that is not the way they *are* seen.

Nor is our lecturer less at sea in the well-known three-color process. He makes the astounding statement that "it is similar to Lippmann's;" gives the credit of inventing it to Ducos du Hauron, in 1878, instead of, as is the fact, to Henry Collen, in 1865, says "the prints are made on *sensitized* paper, somewhat similar to lithography;" and although he gives Ives credit for improving it "somewhat," it is still deficient.

It would be difficult to find in such a small space so many inaccuracies, especially in the writings of those whose occupation should have taught them the value of accuracy, and although they are, on the whole, of but trifling importance, it is of such writings that future history will be made, and therefore, and for that reason only, do I notice them.

* * *

Some of my friends accuse me of seeing from my coigne of vantage in the tower only the more ludicrous side of photographers and photography; but I see both sides, the good as well as the bad, the true as well as the mistaken views that are promulgated; and while it is true that I notice the latter more frequently, there is a reason for it. The good and the true may safely be left for others to profit by; the false, as in the previous note, might, if not corrected, pass for true and form a basis for false history.

But I notice good things sometimes, and one of the best that I have seen for a long time is an article in the March *Photo-American*, on "Flash-light Photography." If I were the editor of all the photographic journals in the country I should reproduce it in every one of them, as it, more than anything of the kind that I have yet seen, is calculated to give a much to be desired stimulus to that most interesting and most convenient of all methods of photography. Its author has struck the nail right on the head; and some idea of the extent to which he goes into the work may be learned from the fact that in photographing a large church he employed no less

than *seven pounds* of his flash compound; equal parts of magnesium and potassium permanganate, distributed in paper bags through various parts of the building, and simultaneously ignited by the touch of an electric button.

* * *

It has always been a surprise to me how American writers on matters photographic could so persistently claim for Daguerre the title of "Father of Photography," and how the American photographers allowed themselves to be thereby so far misled as to erect in the Smithsonian an expensive monument to him as occupying that honorable position.

Hitherto I have been almost alone in protesting against the misapplication of the honor, and therefore, gladly "shake" with Mr. T. W. Bankes, who, in the April *International*, speaking of Talbot's "Calotype," says "Here, then, we find the first practical suggestion, not only of photographic printing, but of the 'negative' from which copies could be printed *ad libitum*. It will be plain to any of our readers with the slightest practical knowledge of the subject, that it is from this invention of Talbot's, rather than from the daguerreotype, that modern photography is descended, and you will please note that Talbot's paper was read to the Royal Society *six months before* Daguerre's secret was revealed." Here is no uncertain sound, but the clear metallic ring; showing unmistakably that the photography of to-day, as was the photography of forty years ago, is the photography of Talbot; and that it has no more connection with the photography of Daguerre than it has with that of Wedgewood, or the discoverer of the action of light on silver chloride.

* * *

Ross has introduced a new lens, and, according to *Photography*, adopted a novel method of pricing it, but one that has its advantages.

The lens is an extra rapid symmetric anastigmat, with an aperture of $f/5.6$ and focal lengths from 6 to 12 inches; and the price is *one pound* (\$4.80) *per inch*; but there is a hint that above 12 inches the ratio will increase.

Notes.

THE GRAPHIC COMPETITION.—We have received the prospectus of the London *Graphic's* third Amateur Photographic Competition, in which thirty prizes are offered, varying from one hundred dollars in cash, to five dollar kodaks. The prize photographs will be published in *The Graphic*, as well as all such as the judges may select for that purpose; and

five dollars will be paid for each so produced not included in the prize list.

The following are the rules governing the competition :

1. No competitor to send in more than six photographs, whether mounted or unmounted.
2. In every case a stamped wrapper must be enclosed for the return of the photographs.
3. Acknowledgement will be made in *The Graphic* week by week of all photographs received.
4. Photographs will be received any time up to June 1, 1899.
5. The name and address of the sender and the title of the subjects should be legibly written on the back of each photograph.
6. Photographs may represent either figures, land or sea scapes, animals, architecture, etc.
7. Every endeavor will be made to return unused photographs, but the manager will not hold himself responsible for loss or damage.
8. All communications to be addressed to the Manager of *The Graphic* Amateur Photographic Competition, 190 Strand, London, W. C.

MR. FRAZER'S now well known "Fifth Avenue by Night" has been awarded the gold medal in the open classes at South London Exhibition. Referring to this picture *The Amateur Photographer* says : "Despite its scattered lights it seems to fascinate judges all over the country." We had thought its "scattered lights" were one of its charms, and wonder what it would be without them.

X PER CENT. SOLUTIONS.—*The Photo-American* gives the following method for making, by the simplest calculation, solutions of any desired strength. Simply multiply the per cent. desired by five (grains if a solid, minims if liquid), and the result is the quantity to be added to an ounce of water. It is not absolutely accurate, but near enough for all photographic purposes.

CHOOSING A LENS.—The average photographer, and especially the beginner, is generally at a loss to know just what kind of lens to choose for the class or kind of work they intend to do. We have already shown the necessity for a suitable focal length, and can confidently recommend for all other information the latest catalogue issued by Bausch & Lomb, of Rochester, N. Y., noticed in our December number. It contains a series of ten half-tone engravings showing the effects of defective lenses, an interesting description of lens making as carried on in their extensive factory, and several fine photogravures, the work of certain of their lenses. Everyone interested in photography should send for a copy, which is to be got for the asking.

VARIOUS COLORS ON VELOX.—Glad to see that photographers are gradually recognizing the advantage of, as far as possible, suiting the colors of their prints to the subjects, we let no opportunity pass of giving such formulæ as may be useful in that direction. The following, especially applicable to Velox, is given by W. E. Henry, in *Photography*, for the production of red, purple and brown.

Prepare three solutions as follows:

A. Hydroquinone	6.5 gm. or 100 gr.
Sodium sulphite	31.1 gm. or 480 gr.
Citric acid	1.6 gm. or 25 gr.
Potassium bromide	1.3 gm. or 20 gr.
Water to	567.0 cc. or 20 oz.
B. Sodium hydrate	5.85 gm. or 90 gr.
Water to	567.0 cc. or 20 oz.
C. Ammonium bromide	7.8 gm. or 120 gr.
Ammonium carbonate	7.8 gm. or 120 gr.
Water to	283.5 cc. or 10 oz.

For Red Tones: Expose to 8 in. of magnesium ribbon at a distance of 4 in., and develop with A., 1 oz.; B., 1 oz.; C., 6 drachms. Develop to allow for considerable reduction in fixing.

Purple Tones: Expose to 4 in. of ribbon at 4 in., and develop with A., 1 oz.; B., 1 oz.; C., 120 minims.

Brown Tones: Expose to 3 in. of ribbon at 4 in., and develop with A., 1 oz.; B., 1 oz.; C., 60 minims.

The tone can be modified (if required) by after treatment in a gold and sulphocyanide bath.

A NEW SATELLITE.—The latest feather in photography's cap is the discovery through its aid of a hitherto unknown satellite held in attraction's chain by Saturn, and revolving round that planet in a larger orbit than any of the hitherto known "moons."

The satellite was discovered on one of the plates exposed in the Bruce telescope in the observatory at Arequipa.

A GAS BURNER GIVING A LIGHT OF 1,500 CANDLE POWER is something new, and if true should be of interest to photographers who desire to be independent of daylight in dull days. Such a light is the "hydro-incandescent," a modification of the Welsbach system, that is attracting considerable attention in London; and, as exhibited in one of the principal streets there, seems no mean rival of the electric arc.

It is pressure that does the business, and considerable pressure at that. The burner is similar to the ordinary Welsbach, but the mantle is stronger, and the extra pressure is obtained by means of a metallic cylinder or tank,

about eighteen inches in diameter and six feet high, and a constant stream of water, acting automatically, but to the tune of something like fifty gallons per hour. If it be true that a 600 candle power lamp can be operated at a cost of two cents per hour, both electricity and acetylene may find in the hydro-incandescent light a powerful rival.

Our Portfolio.

[Prints sent for criticism *-not more than one at a time-* should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*, and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in THE AMERICAN AMATEUR PHOTOGRAPHER.]

380. J. F. WILLIAMS.—“Gathering Wild Flowers” is a good conception, a well selected and arranged subject, but from under exposure totally false in values. The sky is simply white paper, the road almost as white, and white also every leaf of the dense foliage on which light has fallen, while the left, naturally in shade, is simply blackened paper. Something like ten times the exposure would have made a pretty picture of what is now not worth printing. We only notice one print at a time, but to save us from returning to the subject, may say that every word of the above applies equally to “The Approaching Storm.”

381. H. D. ALLISON.—“Parting of the Ways” is an example of excellent photography, both in negative making and printing, but you have made the serious blunder of including material for three good pictures in one, and about as equally divided as the posts in a fence. Then the photograph has been made with a lens of very much too short focus for the length of the plate. Until you can get one much longer you should confine yourself to upright pictures, of which one of really fine quality may be made from each of the three divisions of this photograph.

382. GEO. PATERSON.—“The Dreary Time,” etc., is a very good photograph of a subject of no particular interest except for the really fine bit of cloudland on the left. Such excellent technique is wasted on such a poor selection.

383. M. L. SMITH.—“Moonlight on the Bay” is a very beautiful picture, or rather would be if printed in almost any other color, blue, green, black or gray, anything but the reddish brown. Everything is just as it should be, and all conspire together to make it one of the best “Moonlight” pictures that we have seen for a long time. If you care to send us another copy printed a little lighter, we shall have pleasure in reproducing it. If you do, please mark it with this number.

384. C. H. WILKINS.—“In Middlesex Fells” is a beautiful subject, from just the right point of view, but an utterly worthless photograph. Under exposure, or under development, or it may be both, has resulted in simply black paper everywhere, unless where bright light has fallen. To get proper tonality or correct values is simply a matter of suitable exposure and development. Trees are never so black as you have made them, even at midnight, unless the stars are obscured.

385. HELEN L. GRISWOLD.—Your “Study” is a fine, very fine example of photographic portraiture, in which technique and art are beautifully joined together.

The gauzy texture of the scarf is finely rendered, the pose of the head thoroughly satisfactory, and values as nearly true as may be. The only fault is in the eyes, or rather their expression. Watch them in future work. It is easier to say that they are wrong than to tell you how to make them right; but as you have learned so much, you will by a little study learn that also. We shall reproduce it.

386. F. S. BIDWELL's unnamed print is a good subject from probably the best point of view, only the lens should have been higher, so as to reduce the uninteresting foreground and include the space in the sky. As a photograph it is worthless from under exposure, giving black paper tree trunks and white paper sky and water. Sufficient exposure to give something like true values, would have made this a fine picture.

387. R. B. LAMSON.—In "An Approaching Storm" you had an opportunity of making a really fine picture, but have sadly missed it. The one thing needful, but, especially in this case, the most important thing of all, is tonality or values, and this want is in such evidence as to be seen at a glance. The breaking waves are solid and chalky, and the water nearly black, without suggestion of translucency, while sand over which the rippling waves have passed is almost black, and the débris beyond the reach of the waves completely so. In short, the color or luminous values are about as false as they could be made, and the cause is mainly insufficient exposure, which means, as for such a subject the time must be short, that the plate must be rapid, the light good and the lens one with a large aperture.

388. J. HARTRAUFT.—"Sugar Camp Run" is a fine photograph, perfect in its technique, but of a subject of no pictorial interest; having neither motive, objective point, or indeed any of the essential qualities of a picture. You have evidently mastered photographic technique, and should now learn what constitutes a picture and how to make it.

389. E. W. TANNER.—"The Log Cabin" is without exception and in every respect the finest snow scene that we have seen this season. Selection, point of view, atmosphere, and that rarest of rare qualities, values, all work together to give the impression of a wintry day, not the least important being the half covered footprints in the snow, suggesting the idea that even the dilapidated building had recently been a welcome shelter. Among the host of simply white and black rubbish—under exposed snap shots—that come to us, this really excellent translation of a snow scene is refreshing and encouraging, and we shall reproduce it with pleasure.

390. JAMES THOMSON.—"November" is an under exposed photograph of a few scattered trees of no pictorial or any other interest. The trees are simply black paper, and the sky white. You must learn how to select picturesque subjects, and to expose long enough to get the necessary gradation, before you can make pictures.

391. J. WILL PALMER.—"The Village Blacksmith" is a fine example of *genre* work, that might have been better printed. The greenish black is about the most unsatisfactory of colors. Conception, composition and lighting are all very fine. Printed a little lighter and of a better color, it would be one of the most satisfactory *genre* pictures that have as yet come to the "Portfolio." If you will send a better print we shall gladly reproduce it. See page 117.

392. J. B. BAUER.—"Kaiser" is the head of a noble dog lying apparently in front of his kennel, but the photograph does not do him anything like justice.

White paper is not a proper rendering of the white hair, nor is the black hair properly rendered by black paper. A longer exposure; or what comes to the same thing, better light, was necessary to the getting of true values. Then, to reproduce the head this size; the lens has been so close to the object as to give an apparently false perspective. For a head of this size a lens of at least ten inches is necessary. Try again. Be content with a size considerably smaller, give a longer exposure, or expose in a much better light, and develop with a solution weak in reducer. This latter is always advisable with a subject strong in contrasts.

393. C. W. THOMAS.—The photograph of an oil tank on fire is of very good technique, a good record of fact, but of no pictorial interest.

394. ALICE M. DAVIS.—"Marjory" is a kind of work that cannot be successfully done by snapping with the camera you have. The exposure has been so short that the face is black, and the sky and even the board walk are simply white paper. You should not have had the ugly parallel lines on one of which the figure is sitting, and it should have been an upright instead of oblong, so as to get rid of the useless matter at both sides. In fact, the print is all wrong because your camera is not suitable for the work.

395. HUGH C. WILSON.—"The Clouds Hang Low on Yonder Hill" shows effort which is commendable, even when, as in this case, not quite successful. The subject and selection are good, but the lighting is flat, or more probably insufficient; as, except where these clouds or their reflection all is uniformly dark. But both clouds and reflection are unnatural, cottonwooly, and strongly convey the impression that they are manufactured by an insufficiently experienced hand. We congratulate you, however, on the effort, and assure you that greater practice will lead to greater success.

396. R. C. BORN.—"U. S. Transport, etc.," is of no interest as a picture, and very much under exposed as a photograph, being on the right nearly white paper, and on the left as nearly black. It is one of the myriads of snap shots that are merely a waste of material. You should never consider a print worth mounting in which a sheet of water is represented by white paper.

397. A. W. TANNER.—"Bonanza Spring" is a fine subject, from a fine point of view, and but for the too common fault of very false values, would have been one of the best landscapes of the year. But a far too short exposure has resulted in everything on which light has fallen being simply white paper. Sky, water, and every little jutting piece of rock are simply so many masses of pure white, while water on which a shadow falls, and every little cleft of the rocks, are unadulterated black. We should have reproduced it as a valuable object lesson; but, like too many others, and in spite of our oft repeated request, you send it on an unnecessarily large mount and Uncle Sam's messengers have bent and broken it. The best mount ever made has absolutely no influence on our judgment of a print; and for the sake of all concerned it is far better to mount on any common board, and just a trifle larger than the print.

398. D. G. HOUGHTON's ambition is for expansive subjects, and he mostly fails by having to sacrifice, by very much too short exposures, the foregrounds, to get anything at all in the distance. The best of the lot is "Between the Lakes," and it is a very pretty little picture, or rather will be when he trims off just one-half of the uninteresting foreground. High horizons are sometimes permissible, and even advantageous, but in this it is ludicrous, converting a sheet of water into an

inclined plane, steep as a toboggan slide; but a stroke of the trimming knife makes it as pretty a picture as it is a technically perfect photograph.

399. J. D. CARMICHAEL.—“A Likely Spot” has only one fault, but it renders all its good qualities of no avail. It is a good subject well arranged, and with sufficient exposure could have been made a fine photograph, but a white figure up to the knees in black water is too far from anything like truth to be worth notice. A much longer exposure or very different lighting was required.

400. ED. ILCH.—“Waiting” is an **effective picture**; good in subject and selection, and fairly well photographed, the values, although far from true, being far above the average. The pure white sky is false, and a backed plate would have prevented the somewhat disagreeable halation on both right and left. It is on the whole a step in the right direction, but should have been printed in a warmer color. It is reproduced on page 196.

401. S. L.—“The Blue Jacket” should have been an upright, and not only have got more sky, but also excluded the uninteresting matter on the left. The negative has not been sufficiently developed. If intensified, and an inch and a half trimmed from the left, it will make a very good picture.

402. B. K. R.—“Woods in Winter” is one of the usual snap shots, utterly worthless from under exposure, a sky of white paper, and tree trunks of paper simply black. A much longer exposure was required.

403. GEO. LEE HAYS.—“The Hermit Cobbler.” It is refreshing and encouraging to get a little print that is a picture and with something like true values, a darky cobbler exercising his vocation at his own rickety door and under the umbrageous foliage that overshadows his home. The objective point, the darky himself, is in the strongest part of the picture, and is finely led up to by the rickety fence. The one fault is a slightly excessive bare foreground, but we shall trim off about one-half, and reproduce it as an example of really excellent work.

404. A. W. CLARK.—“On the Susquehanna” is a good subject, excellently arranged, and a very creditable, although not quite successful, effort at picture making. The composition is faultless, and the lighting such as admirably suggests the “shades of evening,” but the printed in sky, although well done, is far too luminous, and by its high tone contradicts the fine expression of the landscape. With a suitable sky this would be a very charming picture.

405. O. B. WARREN.—“A Happy Family,” a nest in *situ*, containing several birds. There is nothing to say about this except that it is not nearly sharp enough for such a subject; and that the whole interest, and it is interesting because of the difficulty of getting it, is included in a space of $2\frac{1}{2} \times 2$ inches, to which the 4×5 print should have been trimmed down.

406. C. E. COOPER’S “St. John’s Church” has only one fault, under exposure. Twice as long would have been better.

407. H. A. FISHER.—“Puppies” is a good photograph of a large patterned tablecloth, with two puppies in the center. The pattern of the cloth is so pronounced as to take the attention away from the puppies. With a plain gray background, and the print an upright, it might have been a pretty photograph.

408. M. C. HALSEY.—“A Portrait” is not nearly up to the average of professional work. From faulty lighting the eye, the most expressive feature of the face, is in utter darkness, and the mass of chalky white across the shoulder is a little

distracting. You have a fine subject, but you must give more careful study to the lighting, and an exposure long enough to secure more correct values.

409. W. B. SHAW.—"The West Side" is a beautiful subject, from a good point of view, but would have been better if the lens had looked a little higher so as to lessen the excessive foreground. As a photograph, however, it is worthless because sky and water are simply white paper.

410. HELEN L. GRISWOLD's "Early Morning" is a very fine little picture, and would have been still better of a little more exposure, or partial intensification of the negative, so as to shed the morning light a little more evenly over the sheep. Her work is well worthy of representation on a much larger scale.

411. L. A. DYAR.—"Gladys D." is not a success. The only thing really satisfactory is the lighting. The figure is too low on the plate, and is thereby dwarfed; the expression is meaningless, and although there are portraits in which the absence of definition is a virtue, it was necessary here, and the focusing should have been much better. For this kind of work you must train your model, and see that she has assumed the desired expression before you expose.

412. FRANK E. FOSTER.—"Noontide" is a good subject, and a pretty picture with but one fault, under exposure. The two spots of chalky white, and the black of the shadows render the values false. A longer exposure would have made this a faultless picture.

413. J. T. SMITH.—"A Minnow Stream" is of interest as a subject but under-exposed as a photograph. In nature it may have looked well, but in the photograph it suggests nothing but the feeling that it was not worth photographing. You should study some book on picture making; and when you have got a good subject be sure to expose long enough to get something else than black in the shadows.

414. A. E. MERGENTHALER.—"Secrets" is not quite up to your own standard, but it is easier to say so than to give a reason for so saying. The idea is good, and the pose of both figures seems to be natural, yet we *feel* as if that of speaker was constrained, and that the listener is interested in something other than the secret, something that she is looking at. This latter could have been avoided by making her look either down, or at the speaker. Then the values are hardly true, and skin texture is not sufficiently suggested, both of which faults might have been overcome by a longer exposure, and development in a solution weaker in reducer. This is one of the most difficult phases in photography, but the credit is all the greater when it is successfully accomplished.

415. HYATT MINSHALL.—"Tacking up the Vine," a "double," in which a man watches himself nailing up a vine, is of no particular interest. Doubles were at one time curiosities, but are now common enough, and generally, as in this case, are simply a waste of time and material. It is, however, a fairly good photograph.

Our Table.

We have to thank Hugh C. Wilson for a very good portrait of himself which we have pleasure in adding to our collection.

THE NEPERA CHEMICAL COMPANY send a beautifully gotten up booklet in which the praises of VELOX are both strongly and truthfully sung, and enforced by a se-

ries of expressive and attractive half-tone engravings, which also show something of the magnitude of the works and the rapidity of their growth, from a little cottage in 1893 to a collection of buildings covering a space as large as many a modern village.

We presume it is intended for free distribution, and is well worth sending for.

"THE PHOTO-MINIATURE," New York: Tennant & Ward, 289 Fourth avenue. This is the first number of the new candidate for public favor mentioned in "Notes" in our March number, and we may say at once that it is an admirable illustration of the well-known saying, "Gude gear is aye in little bundles," measuring less than 8 x 5, and yet tells a story and tells it admirably, that every photographer ought to know, but that is not known to one in twenty, and only imperfectly to a large majority of that one.

It is the story of the lens; what it is, what it does, and how it does it; and it gives the keynote of what the nature, and we have no doubt also of what the quality of the *Photo-Miniature* is intended to be. Judging from this, and from what may be called the prospectus, each number will be devoted mainly to the consideration and elucidation of one particular subject of special interest to the photographer, so that he may find all that he wants to know in one, instead of, as in generally the case, scattered over many numbers.

In this way each number will be a hand-book of the subject on which it treats; and will contain also sufficient of the photographic news of the world to keep its readers more or less up-to-date.

We congratulate the publishers on the success of their first appearance, and heartily welcome the *Photo-Miniature* into the arena of photographic journalism.

Letters to the Editors.

"THE MOST POPULAR CAMERA CLUB IN THE WORLD."

DEAR SIR: The World-Wide Photo-Exchange, I think, deserves the above appellation. It was organized on February 1, 1898, and since has grown to a membership of nearly 400. Amateur and professional photographers who are in love with their work are coming into its ranks every day. Nearly, if not every State in the Union is represented, and there are members in Jamaica, England, New Zealand, Canada and Mexico.

The principal object of this society is to afford its members facilities for the collection of photographic prints of interesting, historical, beautiful or artistic subjects from all over the world. To accomplish this, it furnishes each member, on the first of every month, a copy of the list of members who have joined during the month previous, together with the names of their cameras, size of their prints, and a general idea of the subjects they have to exchange, or wish in exchange, and also any terms or special information that members may wish to impart.

Exchanges are accomplished by mail, each member engineering his own transaction by direct correspondence. The basis of exchange is generally one 4 x 5 unmounted print, and by some it is insisted that untrimmed prints are the more desirable, as they afford the recipient the pleasure of trimming them down to the

proper or most pleasing size. Many members have made large collections. Some have filled seven or eight albums with exchanged prints. They form most desirable and lasting souvenirs, which grow in value as time passes. This number of prints, if purchased from the regular dealers, would cost an enormous amount of money, and would thus be practically out of the average amateur's reach. Another object of this society is the mutual improvement of its members in the art. No one can receive a batch of prints from another without acquiring some new idea, learning some new method, or being imbued with a desire to excel in his work. Members who joined during the first few months of the society's existence, and who did only fairly good work at the time, have made astonishing progress in the course of the year. Every day the secretary receives enthusiastic letters from members who are more than delighted with what the society has done for them in this way. Another evidence of its popularity is the fact that there have been no less than six "State" and "international" societies formed on the same lines as this, and have even copied word for word paragraphs from its prospectus, showing that they "knew a good thing when they saw it." None, however, are just like the W. W. P. E. Ours was the first of all, has the largest and most influential list of members, and is conducted on superior lines to any other. Twenty-five cents is the small fee for a year's membership. No amateur photographer who aspires to improve should be out of it. It is openly advocated by such famous amateurs as John Nicol, G. O. Shields, L. A. Osborne and others. Some of the finest workers in the country—doctors, lawyers, college professors and ministers—are among its most enthusiastic supporters. With such a following, it cannot help but achieve greater success. Each member, upon joining, is given a number, and is thenceforth known by it. A trial year will convince anyone that the W. W. P. E. is the most novel and beneficial organization of its kind, and that its influence will be a potent factor in the advancement of that "Queen of arts," photography.

Send twenty-five cents to the undersigned, Rock Creek, O., and receive your number and the list, beginning with the current issue and running for twelve numbers.

F. R. ARCHIBALD,
Secretary W. W. P. E.

[We have pleasure in endorsing the W. W. P. E. and referring our readers to a notice thereof on page 16 of our January number.—EDS.]

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tioga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

THE MOBILE CAMERA CLUB.

This young but energetic club held its first exhibition and competition in the rooms of the Art League, on March 24, and made a very creditable display, the fifty members showing 190 prints, varying in size from pocket kodaks to 8 x 10, and also some very good enlargements.

The rooms were opened to the public at two o'clock, and from that till ten the pictures were, to a large number of visitors, both a pleasure and a surprise, the pleasure that the examination of good pictures always gives, and surprise at the manifest improvement in the work of the competitors since the founding of the club.

The prints were mostly on platinum and Velox papers; the members following the trend that is rapidly relegating the glossy surface to the professional studio, and even from there, or from those of the better class at least, it is gradually disappearing.

The judges were Messrs. Parish, Tacon, and Smith, who as usual found it no easy matter to decide between the "short leet" in each of the classes, and especially in the landscape; but finally awarded the prize to a sunset effect by Richard Hines, Jr., and honorable mention to "Sunlight and Shadow," by R. O. Perrin. In both the *genre* and still life classes, the honors fell to Miss Shawhan; in the one, for a set of four prints telling "The Story of the Sick Doll," and in the other a view of a shady gallery, "To Catch the Gulf Breeze."

The exhibition was a decided success and an excellent way of keeping the anniversary of the club, which was started in March, 1898.

Through the kindness of the secretary we have had an opportunity of examining the prize pictures, and have pleasure in saying that they are very encouraging. The sunset,

"Softly now the light of day,
Fades upon my sight away."

is a good example of that class of work, although perhaps a little too deeply printed.

The set of four prints to which the *genre* prize was awarded are excellent in design and arrangement. The little fellow playing doctor, both in "Diagnosis" and "Writing the Prescription," proves himself a model capable of assuming just the desired expression. This is especially so in the latter, where the pretence of thinking out something particularly suitable to the condition of the patient is capital. It is exactly as his prototype does, although those that are behind the scenes know that all the while he knows very well that it will be one of his stock prescriptions that he has written hundreds of times. The one fault, common to all four, is false values. Short exposure has rendered pushing development so as to destroy every trace of texture in the lights. Longer exposure, and development in a solution weak in reducer would have given much better technique. We shall have pleasure in reproducing those two, and also the sunset.

THE MINNEAPOLIS CAMERA CLUB.

This club continues its characteristic activity. Since our last notice three evenings have been devoted to lantern exhibitions, the slides including a set by English amateurs, lent by Mr. George Timmins, the sets contributed to the Interchange by the Philadelphia, Frankford, and Orange clubs, and a members' testing night. Another interesting feature, which might with advantage be adopted by other clubs, was a Beginners' Night; which was really a night set apart for the asking and answering of questions, or the getting and giving of information, which after all is, or ought to be, the real object of all photographic associations, or associations of photographers.

The *Minneapolis Journal* of April 8 gives a glowing account of the club's first annual exhibition, which was open to the public on the evenings of Wednesday and Thursday, the 5th and 6th, and all day on Friday, the 7th.

There seems to have been forty-five exhibitors, and from a rough calculation of the number of prints contributed by each, as set forth in *The Journal*, the average appears to have been about ten, so that this energetic club managed to get together an exhibition of 450 prints.

THE CAMERA CLUB OF NEW YORK.

The third annual meeting of the greater camera club, as the president termed it, was held Tuesday evening, April 10th, at the club quarters, No. 3 West Twenty-ninth street, in this city, and was well attended. President Murphy's report was of a general character; he noted the gratifying increase in membership during the year, also the increased bank balance, and said the success of the club publication, *Camera Notes*, deserved special mention, its excellent quality and character had helped the club very much.

The Committee on Prints had been industrious and had presented to the club monthly exhibitions of different photographers of note, which had stirred up the members so much that print making was getting to be the fad, and as a consequence the lantern slide industry suffered.

He regretted to note the lack of interest manifested by the members in club competitions, and alluded to the Combination Prize Competition offered by Mr. Charles I. Berg. The prize, a handsome silver cup, was exhibited on a bracket on the wall. Some liberal donations of apparatus had been made during the year, so that the club was now well equipped for future work.

The secretary next read his report, showing a gain in paying members of thirty-five, and one honorary member, bringing the total membership up to 323. Of these there are twenty life members and seventeen honorary members.

The club held ten regular meetings during the year.

The treasurer's and Auditing Committee's reports were quite satisfactory, showing ordinary receipts to have been \$6,122.29 and special receipts from donations for equipping new quarters, proceeds of annual auction, dinner and smoker, etc., \$2,853.50; total, \$8,976.49. Ordinary running expenses were \$5,048.36; special expenses, moving and fitting up quarters, etc., \$3,601.69, total, \$8,650.05. The gain thus shown added to the balance on hand in 1898 gives the club a handsome cash balance to begin the year on, of \$1,335.06.

Mr. Alfred Stieglitz, the vice-president of the club, and manager of *Camera Notes*, made a report of the operations concerning that publication, and spoke of its high appreciation by artists and all the photographic journals. It had done more to bring in new members of the club than any other agency, and was making a special field for itself and stood alone. It did not cater to the popular side of photography, but did strive to educate the public up to its art possibilities. Although its circulation was limited, it was nevertheless self-supporting, and he mentioned the fact that Vol. II. was sold as high as \$8 a volume. Public libraries and schools were wanting it.

He needed the support of the members in a literary way and in pictures; only good articles would be received. He alluded to a friendly criticism of the journal in the *English Amateur Photographer* of March 31, 1899, as showing what was thought about it over there.

The librarian, Mr. John Beeby, reported that fifty new books had been purchased, and in all 205 volumes added to the library. He complained that some books and publications had been wantonly mutilated. Mr. Charles I. Berg, for the Committee on Prints, reported that several exhibitions had been given during the year and then spoke of the effort that was being made to have a proper art photographic exhibit at the 1900 Paris Exposition. He had had, on behalf of the Camera Club, extensive correspondence with Commissioner Peck and Mr. Kunz, of Tiffany's, on the subject, and it was assured that in the Liberal Arts Building a space would be reserved for the exhibition solely of art photographs. The club voted to put the matter in the hands of the trustees, with power to act as they deemed best. The annual election then took place, and the following ticket was elected: President, William D. Murphy; vice-president, Alfred Stieglitz; secretary, Harry B. Reid; treasurer, William E. Wilmerding; trustees, for one year, William P. Agnew, John Beeby; for two years, Charles I. Berg, William J. Cassard; for three years, Louis B. Schram, John Aspinwall; Committee on Admission, Charles E. Manierre, J. F. Strauss, A. W. Craigie.

The meeting then adjourned and the members and officers partook of refreshments in the adjoining room.

The Berg Prize Print Competition closes May 5, and awards are to be announced on May 9.

An exhibition of prints by John E. Dumont, of Rochester, N. Y., was given between April 12 and April 22 and comprised some very excellent work. The club members' print exhibition will be held on May 22 and continue through the summer.

On Monday evening, April 24, Cornelius VanBrunt, Esq., gave an interesting lecture on "The Flora of Central Park," illustrated by beautifully colored lantern slides.

THE BROOKLYN ACADEMY OF PHOTOGRAPHY.

The annual exhibition of prints and lantern slides, the work of members, was held in the rooms of the society, 177 Montague street, Brooklyn, N. Y., on the afternoons and evenings of April 21 and 22. We are informed that the exhibition was equal to those of previous years.

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander & Davis), Washington, D. C., from whom copies of the patents may be had.]

G. H. HURLBUT, Belvidere, Ill., assignor to J. H. Smith, Chicago, Ill.
Magazine Camera—No. 616,107.

Within the camera is formed an exposure chamber, and in front of and below this chamber is a receiving chamber, and a partition between these chambers. The plates are fed forward to the retaining stops by a spring in the common way, and after exposure, are raised until notches in the edges of the forward-most plate holder registers with these stops, and then the plate falls into the receiving chamber, the partition having been removed by the mechanism which raises the plate.

THEODOR HAUSERMANN, Vienna, Austria-Hungary.

Process of Producing Photographic Ornamentations on Metal—No. 616,706.

The process for dyeing or ornamenting objects of metal, porcelain, etc., in colors from brown to black, consisting in coating the objects with a glue which is sensitive to light, exposing the same then to light by means of negatives or cut out patterns, then washing out the glue not acted upon by the light, then heating the objects so treated to a temperature of 300 degrees to 400 degrees Centigrade and then producing a transparent and protective coating on the surface, as specified.

NORMAN WRIGHT, Bournemouth, Eng.

Developing Apparatus, No. 616,999.

Comprises a box divided into an upper and lower compartment by a horizontal partition. A reel is mounted in the upper compartment and is adapted to carry a film. A bath is located in the lower compartment and means is provided for raising the bath so that the reel may enter it. Means are also provided for cutting the films from the reel.

NEWTON HARRISON, New York City.

Portable Dark Room—No. 617,017.

This dark room consists of a box provided with a plurality of trays arranged above each other in a rack, each tray being provided with a cover. An open space is provided into which the trays may be moved for manipulation. The box is provided with the usual eye opening and the ruby-glass.

ANDREA ANGEL, Liverpool, Eng.

Magazine Camera—No. 617,215.

In the camera box is mounted an open faced receptacle which receives the cut films and the backing strips. A pivoted rectangular open frame fits within the face of this receptacle and forms a marginal support for the four edges of the film. Mechanism is provided whereby when this marginal support is swung upward the foremost film is released and the next is moved into position to be exposed and is then clamped by the open frame.

G. C. O. LANGE, Cresshill, N. J.

Shutter—No. 617,900.

Consists of a vertically movable bar having an exposure aperture and formed with detents on one side of its vertical edges and provided with an actuating spring. Pneumatic means is provided to release the detents and permit the shutter to descend to make an exposure. Mechanism is provided whereby time exposures may be made.

JOHN A. MOSNER, Chicago, Ill., assignor to Adams & Westlake Company.

Shutter—No. 618,799.

A pivoted shutter-leaf having the usual exposure aperture is employed, and just below its pivot said leaf is provided with a pin, against which a V-shaped cam, carried by a spring-pressed bar, operates. By actuating the means for reciprocating this bar the shutter is swung past the lens, opening in first one direction and then in the reverse direction, without any previous setting of the shutter.

E. B. BARKER, assignor to E. & H. T. Anthony & Co., of New York.

Roll-holding Camera—No. 618,930.

In this camera there is a supply spool, a positively driven take-up spool, and rotary guiding device for the film and rotated by it. The measuring device is sup-

ported in a pivoted frame, and is actuated by the guiding device, and is adapted to be swung out of the way of the film during the loading of the camera.

JAMES E. BLACKMORE, Newark, N. J..

Flash Light Cartridge—No. 619,009.

Consists of a pan-like shell, with flat bottom, and wholly open at its top, and adapted to contain a charge of powder. A percussion fulminate to explode the charge is secured to the pan; and means are provided to secure the cartridge to an exploding device.

ALFRED BOGISCH, Feuerback, Germany, assignor to the firm of J. Hauff, same place.

Photographic Developer and Process of Developing—No. 619,066.

The process of developing the photographic image on sensitized plates, consists in subjecting the sensitized plates to the action of a solution of the glycin of an alkylized paraphenylendiamin.

M. J. STEFFENS, Chicago, Ill.

Process of and Box for Packing Sensitized Material—No. 619,097.

The process consists of packing the material in a box, then subjecting it to pressure, then heating the packing and material therein, and then hermetically sealing the package. The object of the process is to drive out all moisture from the package and to prevent its re-entrance thereinto.

The box is of peculiar construction, which readily permits of the manipulation necessary to carry out the process.

WM. D. ROBINSON, Philadelphia, Pa.

Magazine Camera.—No. 619,695.

In the camera casing two compartments are formed to receive plates, and a mechanism is interposed between these compartments by which a plate is simultaneously shifted from each pack to the other pack. By means of this arrangement space is largely economized.

JOHN BURKE and DAVID JAMES, Chicago, Ill.

Plate Washing Box—No. 620,565.

A box, open at its top, is provided on its sides with grooves, to receive the plates. Within the box is provided a movable perforated false bottom, and means are secured thereto by which said bottom may be raised to raise said plates.

G. BOUR-RELLY, Paris, France.

Folding Camera.—No. 621,211.

Comprises two covers which fold and overlap at their edge as book covers; at the back of the book the lens is mounted, and to one of the covers a plate-holder is hinged, means being provided to latch it to the end of the opposite cover when open for use. A flexible bellows is secured to the plate holder and to the lens tube.

WM. H. DEARING, Philadelphia, Pa.

Magazine Camera.—No. 621,447.

A box is employed with a telescopic lens tube, a plate holder on each side thereof, parallel with the axis of the lens tube. A transposing mechanism is provided for moving the plates from one holder to the focal plane back of the lens and then to the other holder, said means being rendered operative by the withdrawal of the lens tube.

Answers to Correspondents.

[Communications for the editors, pictures for criticism, and apparatus and material for examination, should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*]

W. E. COGSWELL.—The sizes that lenses are listed to cover means no more than that the optical construction of each lens is such that it will cover that size; and it is simply absurd to speak of $8\frac{1}{2} \times 6\frac{1}{2}$, 8×10 , or any other *size* lenses. You will find all the information you seek and a great deal more, in the article on page 534 of our December number. See also the letter from W. K. Burton in our last; and remember that in pictorial photography the most important feature of a lens is its focal length, and that in speaking of a lens that feature should always be mentioned: thus, "a ten-inch rectilinear," and that tells all that it is necessary to know.

L. R. G.—We neither answer your question nor notice your prints, because you do not give us your name. We are quite willing to let you employ either a *nom de plume* or initials, but must have your name for our own satisfaction.

JOSIAH ALLEN.—If you are satisfied with the results of the development of a dozen 5×7 roller films at one time, in one dish, it does not matter much how you do it. If your pictures are to be worth anything they deserve and must have special separate treatment and that is most conveniently, comfortably, and successfully given in one of the Lloyd's Ideal Film Holders, a notice of which will be found in our advertising pages. We are surprised that Samantha does not show you the folly of developing a dozen films together.

ARTHUR B. HOLLISTER.—We have already noticed your print, "Peek-a-Boo," in "Our Portfolio," and cannot spare time or space for another notice.

C. G. ATKINS.—We can account for your failure only by supposing that you were employing tank developing solution in a tray, and developing normal or full exposures, as the formula quoted is just what we have many times successfully employed. However paradoxical it may seem, there is a vast difference between the action of a small quantity of solution on a plate lying flat in a tray, and a plate upright in a large quantity. Our tank, to cover 4×5 plates, requires fifty ounces of solution, and with half a grain of Ortol or Tolidol to the ounce, and the other ingredients in proportion, development of hand camera work is generally complete in from eight to twelve hours. But remember this applies only to snap shots; we should never think of developing normal exposures otherwise than separately, and with constant attention.

E. C. GATES.—The sure way to get the speed numbers for the exposure meter described in our March number is by experiment, and we have not time for that. From what we know of the plates therein mentioned, you will be safe to assume that the "27" of the maker you name is about 85.

Select the paper and the plate you intend to use, calculate the exposures at speeds of, say, thirty, fifty, seventy, and ninety; give those exposures by partially drawing out the slide or any other convenient way, and on development you will at once see which is nearest.

C. D. KNOWLES.—Thanks for the prints from "night negatives." They are interesting but considerably under exposed. We have reproduced several very good examples, the best having got a partial exposure just before night fall, and finished after the lamps were lighted, and especially after rain, while the streets are wet.

You should see some of Frazer's work, and we shall be glad to hear from you again. The little film is very interesting; the most perfect example of reversal from over exposure that we have seen. Indeed had you not told us that it was so we should have thought it was a contact positive and a very good one.

C. H. CLARK.—We could answer with more certainty if we saw the negatives, but the prints bear strong evidence of the development of the negatives having been stopped too soon. Intensification of the negative of the house with the two large trees would most certainly improve it.

H. A. CLARK.—The "simplest negative intensifier" is to whiten the image by mercury bichloride and blacken by ammonia. Dissolve sixty grains each of the bichloride (corrosive sublimate) and ammonium chloride (sal ammoniac) in six ounces of water, and leave the thoroughly washed negative in the solution till it is white through and through. Wash well, and place in a solution of ammonia half a drachm to the ounce, till black through and through. The ordinary ferrous oxalate is a better blackener, but it is now rarely at hand.

R. D. S.—Your professional friend is mistaken. From a practical point of view the speed of a lens depends altogether on the relation that its working aperture bears to its focal length. $f/8$ and $f/16$ mean that stops so marked are respectively one-eighth and one-sixteenth of the focal length of the lens, and the former has four times the rapidity of the latter. In other words, if $f/8$ requires an exposure of one second the latter must have four seconds; and this applies equally to all lenses. One lens is more rapid than another only in so far as it works at a larger aperture.

R. C. BENTON.—"The Chemistry of Photography," by Harrison, to be had from our publishers, price three dollars, is probably the most complete work on the subject, and will give you all the information you want, and all that is necessary.

CHAS. C. AUYE.—The buckling of mounts or leaves of albums on which prints are mounted may be prevented by applying the paste only round the edges, or if you must coat the prints all over, employ a gelatine mountant. To make this, soak gelatine in sufficient water to much more than cover it for several hours. Drain off the water, giving it a good squeeze, and melt over a water bath; setting the bottle, a wide mouthed one, in a saucepan of hot water will do; and add gradually with constant stirring enough alcohol to set into a firm jelly when cold. Before using it must be made fluid by placing the bottle in a vessel of hot water.

A SCEPIC.—Watch the swing of a string thirty-nine and a half inches long with anything in the shape of a bob at the end of it and count while you watch, and you will soon learn to count seconds with fair accuracy. But you are mistaken in the supposition that Wynne's exposure meter requires "perfect accuracy." It only needs regularity; that is, that the rate at which you count the time required to darken the paper shall be the same at which you count the indicated exposure. We may add that we have recently made many experiments with this meter, and find that to secure the longish exposures we prefer we have to lower the speed of the plates as given in Wynne's table by about ten.

H. SEELIG.—The table of comparative exposures to which you refer is intended to show—the exposure at one aperture being known—the exposure required at all other apertures. When speaking of the focus of the lens it is the normal or solar focus that is meant, the focus for practically parallel lines, and the various stops are designated according to their relation to that focus. Thus, a stop half an inch in

diameter, belonging to a lens of eight inch focus, would be $f/16$ because it is just 1-16 of that focal length.

There are various methods by which the equivalent focus of a lens may be ascertained, but for ordinary purposes the distance between the ground glass and diaphragm slot will be near enough. When the object focused is distant that distance will be the normal focus, but as the object is brought nearer and nearer the lens the distance between the stop slot and ground glass will become greater and greater, till the object and its image are the same size, when the focus will be exactly doubled, and the stop, instead of being, say $f/16$, will have become $f/32$, requiring just four times the exposure.

To use the table, focus the object at the desired size, ascertain the then focus of the lens by measuring from the stop slot to the ground glass, divide that by the diameter of the stop, and the result will be the aperture value. Knowing what would be the speed at $f/16$, run down that column, the first, till you come to it, and run along to the right till you come under the $f/$ value ascertained, and the time there given will be the required exposure. The book referred to should be out before this meets your eye.

ANDREW CASKEY.—We cannot account for the yellowing in the whites of the prints, only by supposing that you had toned a sufficient number to exhaust the gold in the solution, or that, having been put into the bath without washing, they had made it acid. We have never seen yellow whites unless from an old and exhausted bath.

J. A. ANDERSON.—Tank development is pre-eminently suited to snap-shot work, but it may be employed for all kinds of exposures. You will find it fully described and, a good formula given in all three of the *American Annuals*.

MRS. N. M. C. KNAPPEN.—*Camera Notes* is published by the New York Camera Club, and may be got by applying there. It is published quarterly, price \$2. The address is 3 West Twenty-ninth street. We do not criticise the Competition Pictures, only those sent to "Our Portfolio" for that purpose.

JOHN H. SCOTT.—An article on "Printing on Plain Paper," in our next, will give you just the information you seek. No. 365 was returned a few days after its receipt; we regret that it has miscarried.

GEO. H. DORMER.—We regret that we cannot give you the information you want. You might apply to Mr. George Shiras, 111,434 Diamond street, Pittsburg, Pa., who, we believe, has done some good work in that direction.

C. W. M.—The borders you mention are the work of the engraver, but as doubtless you are a good draughtsman, pretty effects may be made on photographs with the pen, first printing under a mask; or, better still, by etching on the negative.

WILL GRAHAM.—We cannot recommend any particular camera, but may say that the essential feature is a long enough draw, for the $8\frac{1}{2} \times 6\frac{1}{2}$ not less than about 20 inches. A lens of the rectilinear type of say, 13 in., would do for pictorial work, but one of 17 in. will be very much better.

CHAS. KAUFMAN.—The best way to fasten prints to glass is with a solution of gelatine, strong enough to set to a very firm jelly. Soak the print in the gelatine, and immerse the glass also in it. Withdraw both together, and squeegee or otherwise press out the surplus solution. A glossy P.O.P. paper is best and a collodion rather than a gelatine paper, as the latter may soften in the warm solution.

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For Sale—Zeiss lens, $6\frac{1}{2} \times 8\frac{1}{4}$, Series II.-A with B. & L. diaphragm, aluminum shutter; in perfect condition and a splendid lens, for \$45.00 cash. Will send C. O. D. with privilege of examination. Address Andrew Emerine, Jr., Fostoria, O.

For Sale—5x7 Tele. Photo. Poco, 1899 model, complete with one holder and carrying case; new this spring, never used; has 17-in. draw.; cost \$35.00, sell for \$27.50; without lens or shutter, \$18.50; will send C. O. D. with privilege of examination. W. J. Yeager, Salem, O.

Wanted—An 8 x 10 R. R. lens of 12 to 14 in. focal length; must be of good make, in good condition and price reasonable. J. F. Smith, 733 Harrison street, Chicago, Ill.

Wanted—A good lens, 8 x 10 or larger, not less than 15 in. focus; also, 3 plate holders for 8 x 10 Empire State camera. For Sale, 6 plate holders for 4 x 5 Premier camera. W. W. Dewees, Westtown, Pa.

For Sale—An up to-date and well furnished gallery in a prosperous town of 1,500. No other gallery. A good location for good workman. Good prices for work. Going out of business. Address Smith Studio, Sandoval, Ill.

For Sale—One 8 x 10 view camera, double swing reversible back, rising and falling fronts, front focus, rack and pinion, in canvas case; 3 plate holders (double); 6 inside kits for 5 x 7 plates; one 8 x 10 print frame; 1 Low combination shutter, 4 wing. Cheap for cash, or would exchange for good folding camera. H. D. Haffa, D. D. S., Waterloo, Ia.

Wanted—Camera 5x7, $4\frac{1}{4} \times 6\frac{1}{2}$ or 4x5, latter preferred; good make; folding type, with tripod and plate holders, high grade rapid lens and shutter. Send full particulars and quote very lowest cash price to Box 101, Crafton, Pa.

For Sale—One 5 x 7 Premo, Sr. special camera fitted with Bausch & Lomb Shutter and Zeiss Series II.-A Anastigmat lens, case and tripod, good as new. Cost, \$95.00; will sell for \$50.00. R. S. Kaufman, Scranton, Pa.

For Sale—A 4x7 Pony Premo, Sr. camera with carrying case, Rapid Rectilinear Lens, Victor Shutter, Bausch & Lomb Ray Filter and 6 double plate holders; all in first-class condition. Cost \$47.75; will sell for \$32.50 cash. Address W. E. Cogswell, Box 463, Sacramento, Cal.

For Sale—One 4 x 5 Rochester Optical Co. Handy camera, with 2 double plate holders, all in good condition; cost \$9; will sell for \$5. Also, one 4 x 5 Magazine Cyclone camera, nearly new; cost \$10; will sell for \$6.00. Address E. C. Dymond, Libertyville, Ill.

For Exchange—A 12 x 15 Laverne Achromatic lens, good for studio and outdoor work; also, a 11 x 14 single landscape Darlot lens, both in good condition, to exchange for a good and complete 5x7 outfit. Address Morris S. Heagy, Rock Island, Ill.

For Sale—5 x 7 Rochester Rapid Symmetrical lens, $8\frac{1}{4}$ in. focus, fitted with Unicum Shutter, with focusing scale and bulb, new this spring and never used; cost \$24; sell for \$12; send on trial; will exchange for 8 x 10 lens or box. Address W. J. Yeager, Salem, Col. Co., O.

For Sale—A new 4x5 outfit, never used; one 4 x 5 Premo Pony A lens, Goerz No. 2, Series No. 3, with Goerz section Shutter, 5 plate holders and carrying case; cost \$92; sell for \$50; or exchange for anything of value. H. D. Barton, 21 Third street, Rochester, N. Y.

Wanted to Exchange—A Bb Clarinet, nearly new and in perfect order, and an Adlake camera in perfect order, for a good double lens, or offers. Address R. L. Davidson, La Junta, Colo.

Wanted—Dallmeyer or other good portrait or Rapid Rectilinear lens, $6\frac{1}{2} \times 8\frac{1}{2}$ or larger; name lowest figure. G. T. Atkinson, 237 La Salle st., Chicago.

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1 OZ.	4 OZ.	8 OZ.	16 OZ.
\$0.37	1.20	2.10	3.95

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Concentrated solution particularly adapted for developing freely exposed negatives of landscapes.

3 OZ.	8 OZ.	16 OZ.
\$0.70	1.30	2.35

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"ON A GREY DAY."

By Geo. W. Norria.

THE
AMERICAN AMATEUR PHOTOGRAPHER.

Vol. XI

JUNE, 1899.

No. 6.

Ozotype, and Post-fixing Development.



No. 180.

Louis A. Dyar.

"SPINNING A YARN."

HE experimentalist, when he gets to the end of his tether in his search after something new, harks back to the one hundred and one things that were given to the world before their time, and brings to light, in many cases, just what was wanted, and just what the world was waiting for. Of this, during the past few weeks, we have two excellent examples in the so-called Ozotype, and development after fixing.

Ozotype, of which a description and formula for its working will be found on another page, is practically the same modification of carbon printing

as was introduced by Marion, more than twenty years ago. Then it fell flat and was soon forgotten, but it has been germinating, and, just when gum-bichromate had taught us the value of control, and how difficult it was to get it with that method, it has sprung up, simpler than even the ordinary carbon method, and gives, as it appears to us, control to any desired extent.

Just how far Mr. Manly is correct in his theory we are not at present prepared to say; but as to the results, the simplicity, and the control during development, we say without hesitation that he that fails has only himself to blame.

The advantages of Ozotype may be summed up as follows: Perfect simplicity; prints may be made of any desired color, or shade of any color,



By Frederick L. Smith.

"ALONG OAKUM BAY, CASTINE, ME."

and even of various colors in one print. The image is visible and there is no difficulty in knowing just how far to print. Practically no limit to its keeping quality at all three stages of the operation, and last, but not least, it is, with exception perhaps of the blue print, the cheapest of all printing methods.

Hardly less important is the other rejuvenation, post-fixing development, or development after fixing. As far back as the wet collodion days it was found that an image could be developed after fixing; but the fact was looked upon merely as a curiosity, and very little was said about it. Later on, probably about the time of the tannin and other preservatives of that ilk, it was talked about, and even found its way into the journals, but it too was simply a sowing of the seed, and there it has lain till now, to be unearthed just as we have learned how to use and how to appreciate it.

Development, during the early days, was a process of building up; the light-acted-on plate being merely the foundation on which to build, and the operator had to bring the building material to the foundation. By the modern method the building material is on the ground, and has only to be quarried out; in other words, the image is built up from the silver bromide already on the plate. Just what light does to the silver bromide few care to guess and none can tell; but a little consideration will make

it quite clear that whatever the latent image may be, it is sufficiently delicate to require care, and is liable to injury from various causes. To the tourist, going from place to place, with the feeling of a lot of undeveloped plates on his mind, it would be a real relief to know that by simple fixing in plain hypo and washing they might be packed in any way, and knocked about in any way, without injury; and that when his wanderings came to a close, developed into good negatives. And not only so; but developed in daylight, with all the advantages that that means.

We so developed twenty-five years ago, although then only as a curiosity, and we have done it to-day and several times during the week with perfect satisfaction, employing the formula indicated in a recent number of *Photography*.

With the author of that notice, we find that a full, indeed a very full exposure is necessary, that the fixing should be in fresh hypo, and the washing in eight or ten changes of water. For development, the neces-



Richard Hines, Jr.

"Softly now the light of day
Fades upon my sight away."

(First Prize in Landscape and Marine Class, Mobile, Ala., Camera Club Competition,
March 24, 1899.

sary material is silver, a reducing agent, and something to keep the action under control. In the early days it was "acid pyro" and silver; but the following will be found better:

A stock solution is made as follows. In two ounces of water dissolve 100 grains of silver nitrate, and add 245 grains sulpho-cyanide of ammonia. Shake till clear, and fill up to ten ounces with water. This will again become milky, and must be cleared by adding, drop by drop, a saturated solution of hypo, care being taken not to add more than is necessary. It is better indeed to stop just short of its being perfectly clear. This stock solution is to be used as water with which to make up the developer, and had better be kept in the dark. The developer is as follows, it being understood that the material is in ten per cent. solutions, and the pyro preserved by potassium metabisulphite.

Pyro solution,.....	30 minims.
Potassium bromide solution,.....	20 "
Ammonia solution,.....	60 "
Stock "	1 ounce

It is hardly likely that this is the best developer, but it will do for a beginning, and it remains for those who have time to work it out, and it is worth working, as daylight development will be one of the great achievements of practical photography.

Just think of its only being necessary to fix in the dark; wash and dry; and then or any time after, take it into the broad light of day, and develop without fear of fog or any other fault, to be able to see just what you are doing, and be able to do just what you want.



The International Photographic Exposition.

OF the great achievements of this century, photography must be reckoned one of the most important. In every industry it plays a more or less important part and its votaries are legion. It is fitting then that at the end of the century there should be gathered together under one roof a representative collection of the many appliances used in the making of a photograph and an exhibition of pictures showing the present applications of what has been aptly termed the art-science.

The announcement is made that a photographic exhibition will be held in New York in the fall of this year and that this exhibition will be on a scale never before attempted. Assurances of support already to hand



"PHOTOGRAPHING MISS FIDGET"
BY
FRANK R. MILLER.



By S. I. Carpenter.

"DESERTED."

indicate that the affair will be truly representative and worthy of photography. Important contributions from England, France, Germany, and Austria have already been promised, and a representative has left for England to superintend the shipping of exhibits to this country. Manufacturers at home will eagerly embrace the opportunity to personally place before so large an audience the wares that have hitherto been submitted only through the agency of others.

The exhibition will be made particularly interesting by the many demonstrations of processes of manufacture. The construction of cameras will be fully illustrated, and we are informed that one concern, known the country over, will, in all probability, start with the rough wood and show the whole construction of a popular make of camera from start to finish. A photographic paper house will demonstrate their product and invite visitors to bring their own negatives for this purpose. The embossing and gilding of mounts, the grinding of lenses, testing of lenses, making of camera bellows and a thousand and one interesting exhibits will attract the photography-loving public from all over the country.

Electrical lighting of photographic studios has made much progress

during the past few years, and at least one photographer will have a studio with electrical installation in actual operation.

Demonstrations of printing-out papers, platinum paper, carbon printing, shutter-speed testing, film developing and the like will keep the audience interested all the time. The display of magazine cameras will include everything at home and abroad. The photo-engravers' exhibit alone will be probably worth traveling miles to see, and the application of photography to meteorology, astronomy and the sciences will be a revelation to many.

A special loan collection of historical exhibits will attract no little attention. The steps by which the present day simplified methods have been attained will make an exhibit most instructive.

A special department will be the optical and magic-lantern section, in which acetylene, electric light, lime-light and oil lanterns will figure. The progress made in animated photography will be illustrated most efficiently, and the advances in the application of the X-ray will not be lost sight of.



No. 338.

By J. D. Long.

"RUTH."

Dealers throughout the country will avail themselves of this chance to select stock for their Christmas trade, and the exposition will be a good thing for everyone. We need just such a show this year, for never before has photography been so much in evidence, never before has so much care, thought and ingenuity been applied to the perfection of apparatus. Madison Square Garden has already been engaged and preparations for the show are well under way.

The exhibition will be under the general management of Ernest R. Franks, who piloted successfully the great Cycle Shows of 1895, 1896 and 1897. Executive offices, 11 Howard street, New York.

Color Photography with a Diffraction-Grating.



By Mrs. F. Hurndall.

"SURPRISE."

IN the *Philosophical Magazine* for April there is a remarkable and highly interesting paper upon this subject by Mr. R. W. Wood, of the Wisconsin University, Madison, in which is described what is practically a form of the three-color process, which to the best of our belief is entirely novel. We prefer to give the process in its inventor's own words, referring our readers to his original paper for the additional detail he gives upon the building up of large diffraction-gratings from small ones.

He says: "If a diffraction-grating of moderate dispersion and a lens be placed in the path of a beam of light coming from a linear source, and the eye be placed in any one of the spectra formed to the right and left of the central image, the entire surface of the grating will appear illuminated with light of a color depending on the part of the spectrum in which the eye is placed. If one part of the grating has a different spacing from the rest, the spectrum formed by this part will be displaced relatively to the first; and if the eye be placed in the overlapping part of the two spectra, the corresponding portions of the grating will appear illuminated in different colors. This principle I have made use of in the development of a new method for producing photographs in natural color. I have eliminated the use of pigments and colored screens entirely in the finished



"ALONG THE MOUNTAIN TRAIL"
BY
JOHN H. SCOTT.

No. 971.



No. 425.

J. F. Williams.

picture, the photograph being nothing more nor less than a diffraction-grating of variable spacing, the width between the lines in the different parts of the picture being such as to cause them to appear illuminated in their proper colors when viewed in the manner described.

"We will take at the start three diffraction-gratings of such spacing that the deviation of the red of the first is the same as that of the green of the second and the blue of the third (the red, green, and blue in question being of the tints of the primary colors of the Young-Helmholtz theory of color-vision). If these three gratings be mounted side by side in front of a lens their spectra will overlap; and an eye placed in the proper position will see the first grating red, the second green, and the third blue. If the first and second be made to overlap, this portion will send both red and green light to the eye, and will in consequence appear yellow. If all three be made to overlap in any place, this place will send red, green, and blue light to the eye, and will appear white.

"The method that I first employed to produce photographs showing natural colors on this principle is the following: Three negatives were taken through red, green, and blue screens in the usual manner; from these, positives were made on ordinary lantern slides (albumen slides are necessary for reasons which I will speak of presently). The positives, when dry, were flowed with bichromated gelatine, and dried in subdued light. The three diffraction-gratings of proper spacing, ruled or photographed on glass, were placed over these positives, and exposed to the sun or electric light for thirty seconds. On washing these plates in warm water, diffraction-gratings of great brilliancy were formed directly on the surface of

the film. Albumen plates must be used, since the warm water softens and dissolves a gelatine film. Three sheets of thin glass, sensitized with the bichromated gelatine, were placed under the three positives, and prints taken from them. The portions of each plate on which the light had acted bore the impression of the corresponding diffraction-grating, strongly or feebly impressed, according to the density of the different parts of the positives. These three plates, when superimposed and placed in front of a lens and illuminated by a narrow source of light, appear as a correctly colored picture, when viewed with the eye placed in the proper position. Perfect registration of the different parts of the picture could not be obtained in this way, for obvious reasons. I worked for awhile with the thin glass from which covers for microscopical slides are made. This gave much better results, but was too fragile for practical purposes. It then occurred to me that if I could get the entire grating system on a single film, not only would the difficulty about perfect registration vanish, but the pictures could be reproduced by simple contact printing on chrome-gelatine plates as easily as blue prints are made. I was surprised to find that successive exposures of the same plate under the positives, perfect registration being secured by marks on the plates, produced the desired result. On washing this plate in warm water and drying, it becomes the finished colored photograph. Where the reds occur in the original, the spacing of the first grating is present; where the yellows occur the spacings of both the first and second are to be found superimposed; where



"Writing Prescription."



"Diagnosis."

"THE SICK DOLL."

Prize pictures at the Mobile Camera Club's competition, by T. M. Shawhan.

the blues occur are the lines of the third grating, while in the white parts of the picture all three spacings are present. It seems almost incredible that, by exposing the plate in succession under two gratings the spacings of both should be impressed—superimposed—in such a manner as to give the colors of each in equal intensity; but such is the fact. Thus far I have had at my disposal but two gratings of only approximately the right spacing, one giving the red, the other the green; with these I have photographed stained-glass windows, birds, and butterflies, and other still-life objects, the finished pictures showing reds, yellows, and greens in a most beautiful manner. By making a separate plate from the blue positive, using the same spacing as with the green, and setting this plate behind the other at an angle, I have obtained the blues and whites, the grating-space being diminished by foreshortening, though, of course, perfect registration of the different portions of the picture could not be obtained.

“One of the great advantages of this method is the facility with which duplicates can be made. If we place the finished picture in a printing-frame over a glass plate coated with bichromated gelatine and expose it to sunlight, on washing the plate in warm water we obtain, by a single printing process, a second color-photograph, equal to the first in every respect, and also positive. From this second copy we can print others, all being positive.

“The apparatus for viewing the pictures consists of a cheap double-convex lens mounted on a little frame, as shown in the Fig. with a perforated screen for bringing the eye into the right position. I find that by using a lens of proper focus it is possible to so adjust the apparatus that the picture can be seen in its natural colors with both eyes simultaneously, since corresponding overlapping spectra are formed on each side of the central direct image. A gas-flame turned edgewise, or the filament of an incandescent light, makes a convenient source of light. The colors are of great brilliancy and purity, almost too brilliant in fact, though dark reds and ochres are reproduced with considerable fidelity. The pictures can be projected by employing a powerful arc-light, placing a rather wide slit in the overlapping spectra, and mounting the projecting lens beyond this. The pictures that I have obtained thus far measure 2.5 in. by 2.5 in., and have been thrown up to about three feet square. The fact that only a small percentage of the light is utilized makes great amplification difficult. Certain experiments that I have made lead me to believe that the process can be greatly simplified.

“I have exposed an ordinary photographic plate in a camera under a diffraction-grating placed in front of, and in contact with, the film. On development, we obtain a negative, the dark portions of which are broken



"JUST BEFORE THE STORM."
BY
HENRY STARK.

No. 448

up into fine lines, corresponding to the lines of the grating; and on viewing this in the apparatus just described the blue components of the picture are seen, though not so brilliant as with the transparent gelatine plate, owing to the coarseness of the grain.

"I believe that by the use of a suitable photographic plate, to be exposed in succession in the camera under red, green, and blue screens, on the surfaces of which suitable diffraction-gratings have been photographed, it will be possible to obtain the color-photograph directly. The screens can be swung into position in succession by a suitable

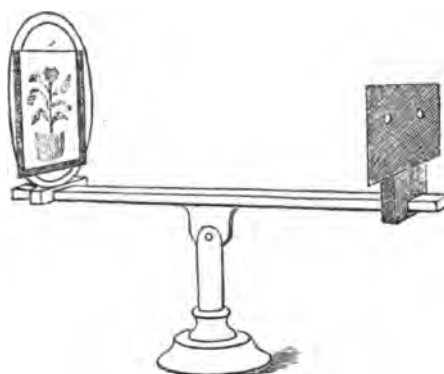


FIG. 1.

mechanical arrangement operated outside of the camera. The plate, on development, will be a negative in the ordinary sense of the term, though when seen in the viewing-apparatus it will appear as a colored positive, since on the transparent portions which correspond to black in the original no grating-lines have been impressed; consequently these portions will appear dark. The dark portions, however, where the lines are impressed, will light up in their appropriate colors. From this plate as many copies as are desired can be made by contact-printing on bichromated gelatine.

"Of course, it is a question whether superimposed gratings can be impressed on a plate in this manner. Judging from the experiments I have made, I imagine that the gratings on the color screens would have to be made with the opaque portions broad in proportion to the transparent."



A TRUE man never frets about his place in the world, but just slides into it by the gravitation of his nature and swings there as easily as a star.

From the British Side.

BY A CAMERAMAN.



By Elizabeth C. White.

"THEIR FIRST APPEARANCE."

THE sensation of the day in photographic circles is Ozotype, a method of pigment printing that is destined to become popular; probably to supersede all others for pictorial purposes.

In the Royal Photographic Society's exhibition last year there were several exhibits by Mr. Thomas Manly that attracted considerable attention, and gave rise to much speculation. They were said to be by a carbon or pigment method, free from the difficulties, imaginary and real, that have kept that process as hitherto known, so much in the background. A

visible image, hence no actinometer, no safe edge, non-reversal of the image, the sensitive paper keeps for years, and no contact between the chromic salt and the pigmented gelatine—just enough to whet the appetite for more; which, through the exigencies of the Patent Office, was not forthcoming.

But we have got it now; and it was worth waiting for. At a recent meeting of the Royal Photographic Society Mr. Manly gave a demonstration of the working of the process, and an explanation of the theory on which it is based, so far as he understands it; which may be summarized as follows:

Any good paper, such as Whatman's or Arnold's, preferably sized by floating on a two per cent. solution of gelatine, is coated by brushing over with a solution of a chromic and a manganous salt, and printed in the usual way, giving an easily-seen brownish-yellow image, the chromic salt, under the influence of light, having given up part of its oxygen to the manganous, which thereby passes into the manganic state. The print is then washed to get rid of the soluble salts, and dried, and in that state will keep indefinitely.

The next step is to immerse for about a minute a piece of unsensitized "carbon tissue"—it may be of any colored pigment or even colored by any of the aniline colors—in a solution of acetic acid and hydroqui-

none or any of the phenol derivatives introduced as developers. The print is also immersed in this solution, but only just long enough to get moist, and the two withdrawn together, squeegeed and hung up to dry.

Development is carried on exactly as in ordinary carbon printing. The print and squeegeed on tissue, as soon as dry or any length of time thereafter, is soaked for half an hour in cold water, and then transferred to warm water, and in a short time the paper backing of the tissue will float off or be easily removed, and the unaltered pigmented gelatine washed away.

Mr. Manly's explanation of what has taken place is this: Under the influence of the acetic acid the manganic salt has been induced to give up the oxygen it got from the chromic salt and return to the manganous state, and that that oxygen, at the moment of separation, is in its modified form of ozone, in which it has the property of rendering soluble gelatine insoluble. In this way every portion of the gelatine with its contained pigment that has been in contact with the image, and in proportion to the density of that image, has been rendered insoluble and adheres, while all not so in contact is washed away. The hydroquinone or other phenol derivative is supposed to assist the ozone in hardening the gelatine. Ozone is, therefore, the active agent, hence the name given to the process by its author, Ozotype.

The following may be taken as a working formula for experimental purposes, but, of course, it will be with this as with all other photographic methods, each will work out the formula that suits him best:

SENSITIZING SOLUTION.

Manganous sulphate.....	14 parts
Potassium bichromate	7 "
Water.....	100 "

This may be applied to the paper by a Buckle brush, spread with a glass rod, or by any other of the various methods known to photographers, and the paper clipped up to dry, in the dark room of course.

THE ACID BATH.

Acid acetic, glacial.....	3 parts
Hydroquinone.....	1 "
Water.....	1000 "

Rough paper requires deeper printing than plain; contrast is increased by increasing the acid, and softness by increasing the hydroquinone, and the acid bath should be at a temperature of between 65° and 75° F.

Notes.

CHANGE IN PAPER PRICES.—Concerning this *The Professional Pointer* says: The advance of sixty per cent. in raw paper stock made by the foreign mills has, of course, had its effect on the sensitized paper market. Gelatine papers have been forced up sixty cents per gross, or from seventy-five cents to \$1.35 for cabinet. Very little change has been made in the American Aristo papers, the only real advance being twenty-five cents per gross on Aristo, Jr., Cabinets. Platino Cabinets remain the same.

Discounts to dealers have, however, been changed, which will, of course, effect a similar change in dealers' discounts to photographers.

Consumers of permanent high-grade collodion paper will suffer little or no inconvenience, but consumers of cheap papers will be obliged to raise their price of photographs or suffer loss.

VELOX.—The question of the "keeping" quality, before exposure and development, is one of considerable importance, especially to the amateur who prints only now and then. Mr. H. C. Moore, of Telluride, Col., writes: "I developed some prints on velox paper that I have had for about three years, and they came out fine."

We may add that we have to-day exposed and developed some carbon velox that we have had for over two years, kept in its original envelope, and that the prints are in every respect as fine as we got from the paper on its arrival direct from the factory; which says a good deal for its keeping qualities. They were developed with the velox capsules of tolidol, prepared by the Haller-Kemper Company, of Chicago, a developer that the longer and the more frequently we employ, the better we like. The only fault we have with tolidol is that we do not know what it is, and we *do* like to know what we work with.

CARBON OR PIGMENT PRINTING.—Whatever we may say about, and however much we may employ other printing methods, we hold very strongly that, for many purposes at least, nothing can approach carbon; and we shall never consider our mission accomplished till we have induced photographers generally to at least adopt it as one of their methods.

We are, therefore, glad to see that the king of carbon printers, the London Autotype Company, of 74 New Oxford street, W., have issued two little books that ought to be in the hands of every photographer. They are "Carbon Printing in the Tropics," by Colonel J. Waterhouse, and "First Steps in Autotype Printing," by the company itself. The first includes the results of the Colonel's experience in India, and should be especially useful to workers during our dog-days; and the second is the

outcome of a knowledge that includes everything that is known of pigment printing. Eighteen cents will pay for both, with the necessary addition for postage, and they will be found well worth sending for.

PLATE-BACKING FRAME.—We have often and strongly urged the backing of plates, and suggested several methods by which it might be easily accomplished; but the best that we have seen is the backing frame designed by Mr. Avery, and recently put on the British market.



THE AVERY BACKING FRAME.

The cut explains itself, and shows how easily a dozen plates may be backed in a few minutes, without soiling the fingers or touching the film side.

PLATE BACKING.—A German exchange recommends the following backing, which should be both convenient and effective. Dissolve by a gentle heat 30 parts of castile soap, scraped to powder, in 600 parts of alcohol, and add six parts each of erythrosine and aurine. It may be applied to the back of the plate with a brush or sponge, dries almost as fast as laid on, and is easily removed by a moist cloth before development. We have tried it and find it all that is claimed for it.

THE EASTMAN COMPANY has gained another victory; this time in France. A certain Dr. Krugener and M. A. Schmand, having issued a circular stating that their manufactures surpassed the Kodak apparatus, and in other way making unfavorable comparisons, were brought before the Tribunal of Commerce, in Paris, declared guilty of unfair competition, prohibited from printing or distributing circulars in any way alluding to the Kodak, under a penalty of 50 francs for each infraction, amerced in 1,500 francs as damages, and ordered to spend 350 francs in advertising the decision in the newspapers. They know how to do some things better in France.

POTASSIUM CHLOROPLATINITE.—M. Vezes, in the *Bulletin* of the Chemical Society of France, gives the following simple method of pre-

paring this salt, now so largely used in photography, and hitherto prepared in so roundabout a way.

To a quantity of water is added chloroplatinate considerably in excess of what it will dissolve even at the boiling point; and to this is added, molecule for molecule, neutral potassium oxalate; say 37 parts of the crystallized salt to each 100 parts of the chloroplatinate. If the mixture is now raised to the boiling point the oxalate will dissolve, react on the dissolved platinate with evolution of carbonic acid, and the yellow platinate solution will assume the bright red of the platinate. If ebullition is continued the undissolved platinate will gradually dissolve, be converted into platinite which, on cooling, will be deposited in perfectly pure crystals, to the extent, if evaporation has been carried far enough, of 80 per cent. of the theoretical quantity; and the addition of alcohol to the mother liquor will precipitate nearly the whole of the remaining salt.

THE JOLLY METHOD OF COLOR PHOTOGRAPHY is apparently going far ahead of its contemporary in Chicago. While the exploiters of the latter are apparently content with sending out poetical effusions, the former is undergoing a considerable commercial exploitation; and its inventor has recently patented an improvement by which the slightly objectionable linear appearance of the colored image is almost, if not altogether, removed.

Briefly stated the improvement consists in placing on the positive the line screen, or on an independent film a transparent linear pattern in relief, the effect of which is to so refract the lines in color as to practically obliterate them and give to the image the desired homogeneous appearance.

DUPLICATING NEGATIVES OR POSITIVES.—Elsewhere we have noticed the suggestion of the committee of the Philadelphia Society as to the making of positives direct in the camera, and now we clip from *Photography* the following account of the editor's experience, by which it will be seen how easy it is to duplicate either negatives or positives:

"Wishing to make a reversed negative, we proceeded after a few trials on the following lines: An Ilford black-tone lantern plate was exposed behind the negative at twelve inches from a gas flame for thirty seconds. This would have erred on the side of over-exposure had we been intending to make a lantern slide. It was then developed with pyro-soda until well through to the back, rinsed, and placed at once in a three per cent. solution of ammonium persulphate.

"It was left in this until the deepest shadows were seen to be practi-

cally clear glass, and was then again well washed. To make quite sure, it was next exposed, back and front, to a gas flame for half a minute, and developed once more in pyro-soda. A negative was obtained in which there was very little, if any, more veil in the shadows than it is advisable to have in ordinary practice in negative taken direct—certainly not enough to retard printing to any serious extent.

"The process is simple, speedy, and effective, and we recommend those of our readers who wish to make a reversed negative occasionally to try it. It should prove of considerable use in making enlarged or reduced negatives in the camera at one operation, as it is both simple and certain."

The Battle of the Toning Baths.

[We extract this from *The British Journal of Photography*, and direct the special attention of our readers to it, both because Professor Burton is one of the most reliable authorities, and because it fully corroborates our oft repeated declaration that prints intelligently toned in a suitable combined bath are at least as permanent as those toned by any other gold method.]

BY the last batch of issues of *The British Journal of Photography* that has come to hand at the remote place whence I write, I see that the battle of the toning baths for gelatino-chloride, and gelatino-citro-chloride printing papers, known by various trade names, some of which names are execrable, rages as furiously as ever. It mostly refers to the old question of mixed toning and fixing *versus* separate.

What I have just read makes me wish to put before your readers a method of combined toning and fixing which reduces the producing of gelatino-chloride prints to the greatest simplicity possible. I have published the process before now, in fact when I first worked it out, just about twelve years ago, at which time the paper referred to was very little used, there being, if I remember rightly, but one brand on the market. I could not then, however, say of it what I can now, namely, that it gives more permanent results than any single bath that I have ever used, or than any separate baths either. Of course I speak comparatively when I use the word "permanent," for no silver print can be called permanent in the absolute sense of the word.

When it is said that some single print on silver paper—albumenized for example—has kept for thirty years without showing any sign of falling off, no proof of permanency in any sense of the word is given; but when it is stated, as I can state of prints toned and fixed by my bath, that on various kinds of paper, between the time of twelve years ago and half a year or so since, many hundreds in number, not one has, to my knowledge, faded, and only a few have "gone yellow in the whites," at least a strong presumption of comparative permanency is made out.

Another reason for presuming permanency, in the case of the results of the bath that I advocate, is that the prints fade less under the influence of a bichloride of mercury solution than those toned by other baths, and this, I believe, simply for the reason that more gold is deposited. The bath is not a cheap one. It takes more gold to tone a sheet of paper with it than with any other bath I know of; but it is many years since I stated in these columns the opinion that toning baths economical in gold were by no means to be encouraged, but, on the contrary, those that used the most gold, so long as that gold was all deposited on the image.

The general principles of the particular bath I refer to are as follows:

1. A very strong solution of hypo, so as to make sure that the prints are thoroughly fixed before the toning is finished.
2. A comparatively strong solution of gold, otherwise the toning is intolerably slow.
3. The neutrality or slight alkalinity of the bath, to be maintained even if an acid paper is used.
4. The same solution never to be used twice.

My formula has been modified from time to time by way of improvement, and has also been more or less altered for different kinds of paper. I have not with me the notes of all these modifications, but give below instructions for the use of what may be considered a typical bath. The paper is to be printed a little deeper than for most toning baths.

Hypo	2 ounces.
Borax	80 grains.
Chloride of gold.....	2 grains.*
Water, up to.....	8 ounces.

To this is added, say, 30 or 40 grains of powdered chalk. This does not dissolve unless the bath tends to become acid. Otherwise it remains as an inert powder at the bottom of the dish. It might seem that such a powder would be likely to "dirty" the faces of the prints; but, as a matter of fact, it does not.

The bath should be used at as near 65° F. temperature as possible.

The prints are taken unwashed, as they have come from the printing frames, and are placed dry, face downwards, in the solution. The rest of the process is the usual one. The color is judged of best by looking through the prints. As all sensitiveness is lost in a very short time, gen-

* This quantity is variable. In the first place, the so-called chloride of gold of commerce is very variable as regards the quantity of gold contained. I assume here the use of the best make, containing very nearly fifty per cent. of metallic gold. Then, different papers need different quantities of gold, and still again it is evident that a delicate vignette needs very much less gold than a print with dark shadows, the image extending to the edge of the paper. The matter is very simple, however. If two grains involves very slow toning, the quantity is to be increased. Three grains is nearly always sufficient.

erally about a minute, daylight may be used; but I should fear to use it very strong lest the hypo-silver solution should be acted on by light on the surface of the paper. The time of toning should be about ten minutes.

I generally tone to a very deep brown. A purple can be got with some papers, but I have very seldom, in fact, I suppose, I should say never, been able to get a good actual black.

The quantity of solution for given area of paper is so small that there is, say, only half that originally mixed when a batch of prints has been toned, but this depends greatly on the thickness of the paper; of course, this is worth keeping for residues by those who work on a large enough scale to make gold residues a matter of consideration. A first washing water would certainly also contain some gold, but I have never gone into this refinement. Of course, a thorough washing is needed afterwards, and a hardening bath may be used if it is found necessary.

I ought to state that a couple of years or so ago I sent a sample of prints, toned by the process I have described, to one of the makers of printing-out papers having, I believe, a very large sale. The firm answered to the effect that the tone was admirable, but that the whites were impure—were yellows, in fact, not whites. Well, I could not see the yellow on simply looking at the prints, nor could any of several people I referred to see it, though one of them was a professional painter.

We all could, however, see a slight yellow tinge by contrast when a sheet of pure white "double cream-laid note paper" was superposed over one half of the print. On, however, washing, fixing, washing again, and drying a piece of the very same brand of printing-out paper, there was no comparative yellowness to be seen as regards the prints; but *this paper itself* was slightly yellow in comparison with the pure white note paper. It is true that the printing-out paper was not brand new in either case. Brand new printing-out paper is not to be had in the Far East; but it had not been kept for nearly the limit of keeping time mentioned by the makers.

I may mention that the makers stated their inability to tone with my bath at all. The reason was simple; they had used just four times the quantity of water that I recommended! I have used a great deal of their paper since, and have not altered my concentrated bath.

As to yellowness again. I cannot consider a yellowness so slight as to be imperceptible except by comparison with an exceptionally white paper to be of any consequence at all. Indeed, I know no reason why yellowness should not be encouraged in many cases, except that the yellow shade so often seen on old silver prints is an unpleasant one.

A pure white paper is generally avoided in the case of etchings, photo-

gravures, and in many other cases of art work. The large quantities of paper exported from this country (Japan) to Europe and America are none of them pure white. When Mr. Mortimer Menpes was in Japan a couple of years or so ago, he examined all samples of Japanese paper he could get hold of, and chose for water-color work one with a decidedly yellow tinge.

I may say that, in the few cases in which prints toned by my bath have been turned out "yellow in the whites" or have become so, it has been because there has not been enough hypo in the solution, or that the prints have been allowed to stick together. I think there has not been a case of this yellowness when the manipulations have all actually been my own.

I have known no case of double toning except in attempt to get a pure black—attempts which, as already indicated, have been failures.

W. K. BURTON.

The United States Patent System.

THOSE of our readers who are in any way connected with the manufacture of photographic apparatus or material will be interested in the following extracts from a paper kindly sent to us by Messrs. Davis & Davis, through whom we receive our monthly list of photographic patents, trade-marks and designs.

A United States patent gives to the patentee the exclusive right to manufacture, use, and sell his invention or the product thereof, for a period of seventeen years; and the following are the main conditions on which such patents are granted.

First. That the applicant be the first and original inventor of the device sought to be protected.

Second. That the device sought to be protected has not been in public use or on sale in the United States for more than two years prior to filing the patent application.

Third. That the device shall not have been patented nor described in any printed publication, in this or any foreign country, for more than two years prior to the filing of the application.

There are other less important conditions which are more of a technical nature and rarely concern the United States inventor. As to the first requirement, it need only be said that the inventor must make the application in his own name. But the patent is not always granted to the first inventor. It happens frequently that the applications of rival inventors meet in the Patent Office, and in that case the patent is awarded to the first inventor only upon his showing that he has been diligent in perfect-

ing his device and in filing his application for patent. Lack of diligence is only legally excusable in case of extreme illness, poverty, insanity, etc. No mere excuse that that application was delayed by "press of business," or in perfecting other inventions, will prevail in a priority contest. It has been held in some decisions in priority contests that in case the inventor is too poor to carry on experiments and make the application, any efforts he may make to raise the money will be considered in his favor.

As to the second requirement, it simply means that if public use or sale of the device has taken place more than two years before filing the application the patent will be invalid.

The third requirement means that if the device has been disclosed in a printed publication or a patent in this or any foreign country more than two years prior to filing the application the patent will be declared invalid upon proof thereof.

Another requirement (which most concerns foreign inventors, however), is that the application must be filed in the United States Patent Office within *seven months* of the filing of any foreign patent application.

The substance of this is that it behooves inventors to be diligent in perfecting their rights, by filing their patent applications at the earliest possible moment, for in no matter is delay so fatal as in patent matters. As a general thing any reasonable delay is permitted after the application is filed, but all delay is dangerous that takes place before filing the application.

WHO MAY PROCURE PATENTS AND WHAT MAY BE PATENTED.

Any person, whether citizen or alien, who is in possession of any new and useful art or process, manufacture, machine, composition of matter, or any improvement thereof, may obtain letters patent. The inventor should make the application in his own name. Where two or more persons are the inventors the application should be made in their joint names. In case it is desired that the patent issue in whole or in part in the name of another, a purchaser, for instance, the inventor may execute an assignment to that effect. Should the inventor die before making the application, his executor or administrator may apply for the patent.

PRELIMINARY STEPS.

Owing to the enormous number of patents now granted, there being about 650,000, it is invariably the safer rule to employ an attorney to have the Patent Office records searched before filing an application. An attorney usually charges \$5.00 for this search. The Patent Office will not make a search until the application is filed. There are now about 2,050 patents granted for photographic apparatus, divided up into fifty-four

sub-classes, not including photographic coin controlled apparatus and photometers, classified in other divisions. Copies of these patents may be had for five cents each, by applying direct to the Patent Office, but specific data must be given in applications for copies. Stamps not receivable.

COST OF PATENT.

First government fee, payable when the application is filed, is \$15.00, and the final government fee, due when the application is allowed, is \$20.00, six months being allowed in which to make this latter payment. Models are not now required; clear line-drawings made according to a special scale being sufficient.

CAVEATS.

A caveat is for the purpose of protecting an incomplete or imperfect invention while the inventor is experimenting, but a caveat should only be applied for when the invention is in an exceedingly embryo condition. The duration of a caveat is one year, but it may be renewed as long as desired. The government fee is \$10.00 a year, payable in advance.

DESIGNS, TRADE-MARKS AND LABELS.

The Patent Office also grants what are called design patents, covering new patterns for textile fabrics, wall-paper, etc., and new shapes of articles of manufacture, these patents being granted for three and one-half years or seven years or fourteen years, the government fees being respectively \$10.00, \$15.00 and \$30.00. It also has jurisdiction over the registration of trade-marks, the registration fee for each of which is \$25.00, and of labels and prints, the government fee for copyrighting these latter being \$6.00 each.

PUBLICATIONS OF THE PATENT OFFICE.

The Patent Office publishes for free distribution several pamphlets containing the patent laws and laws relating to the registration of trade-marks and labels. It also publishes a roster of patent attorneys entitled to practice before the Patent Office, this being sold at five cents a copy. It publishes weekly the *Official Gazette*, ten cents a copy, \$5.00 a year; contains claims and cuts of all patents, designs and trade-marks, and lists of labels and prints copyrighted each week.

EXTENDING PATENT, TRADE-MARK AND LABEL LAWS TO OUR NEW POSSESSIONS.

The Secretary of War has issued an order that in territory subject to military government by the forces of the United States, owners of patents, including design patents, which have been issued or which may hereafter

be issued, and owners of trade-marks, prints, and labels, duly registered in the United States Patent Office under the laws of the United States relating to the grant of patents and to the registration of trade-marks, prints, and labels, shall receive the protection accorded them in the United States under said laws; and an infringement of the rights secured by lawful issue of a patent or by registration of a trade-mark, print, or label, shall subject the persons or party guilty of such infringement to the liabilities created and imposed by the laws of the United States relating to said matters; Provided, That a duly certified copy of the patent, or of the certificate of registration of the trade-mark, print or label, shall be filed in the office of the governor-general of the island wherein such protection is desired; and provided, further, that the rights of property in patents and trade-marks secured in the islands of Cuba, Porto Rico, the Philippines, and other ceded territory, to persons under the Spanish laws, shall be respected in said territory, the same as if such laws were in full force and effect.

Words from the Watch Tower.

BY WATCHMAN.

NOTHING in the whole range of photographic literature puzzles me more than the frequency with which the question of 10 per cent. solutions bobs up, and the statements as to what is, and what is not an accurate 10 per cent. solution. In a recent number of *The Amateur Photographer* it is dealt with in three different places, and even the usually very clear sighted editor, in one of them becomes hazy over the changes in volume on dilution.

Surely the thing is as plain as a pikestaff. A 10 per cent. solution, from a photographer's point of view, is one that in each ten minims by measure contains one minim of a liquid or one grain of a solid. To make such a solution it is only necessary to add a cypher to the number of grains or minims, and when the material is dissolved fill up to that quantity. Neither change in volume or dilution, nor indeed anything else has anything to do with it; although a rise or fall in temperature will have a trifling effect, but so infinitesimal as to be unworthy of notice. Every photographer should work intelligently, and know what he is working with, and instead of the so much of No. 1 and so much of No. 2, should know just how many grains or minims will be required to produce any particular result. Then he should, wherever possible, employ 10 per cent. solutions; because whatever number of grains or minims he may

require, it is only necessary to add a cypher to that number and measure out that quantity.

* * *

It is a pity that anyone should go to the Patent Office with anything connected with photography who has not been a diligent reader of the journals. A case in point appeared in the last number of the A. A. P. Among the patents there recorded is one granted to L. H. Wallace, assigned to the Gundlach Optical Co., for a mirror to be hinged to the focusing frame, and with a hood to exclude the light, in which hood there is a lens or eye-piece. It is a good thing, but it has not been new for more than a quarter of a century, and has been described again and again in the journals.

* * *

The British Biograph Co. has made a record in the rapid taking and exhibition of a horse race that will be hard to beat. The race, the Grand National, on the Liverpool course, was started at 3:35 p. m.; ten minutes later the operators, one of whom was W. K. L. Dickson, who used to be our Edison's right hand man, with the exposed film in their pocket, jumped into a wagon drawn by, according to its owner, the fastest horse in Liverpool, and covered the five miles between the course and the railway station in exactly twenty-two minutes, the train, even although an express, having waited the odd two minutes for them.

On the train there was a special car fitted up as a dark room, with water tanks and the big developing drum; and by the time they reached London, at 8:15, the film was developed, and through the constant revolution of the drum, nearly dry. At the station they were met by a large furniture van, which quickly took them to the laboratory, where the positive was printed, developed, dried, and exhibited to an admiring palace full of spectators at 11:10, just seven hours and twenty-five minutes after the race was started, some hundred and fifty miles away.

* * *

I hope the editor of the *British Journal of Photography* will forgive me, but I cannot help uttering a mild protest against one of the sentences in his notice of the ludicrous absurdities contained in the paper on "The Modern Problem in Photography," read by Mr. Romyn Hitchcock, before the American Association for the Advancement of Science. He, (the editor) says: "The Hitchcock theory of color photography is just the sort of thing that we should expect a fairly clever amateur to put forward after a year's dabbling in photography." I don't know much about the calibre of the modern British amateur and cannot speak for him.

but have studied the American variety from all points of view, and while I am willing to admit that he has a very great deal to learn, I do not believe that there is one, and most certainly do not know one, with a head sufficiently empty to evolve such a theory, or to swallow it when evolved by another. That the paper found its way into an American photographic journal is a pity, but that is no reason why my good friend of the B. J. should so libel the "clever amateur."

American Interchange Slides.

MONTREAL CAMERA CLUB.

The fifty slides from this club are contributed by eight members, and on the whole they are disappointing. With a few exceptions they may be characterized as of a high class of professional slide work—clean, clear and sharp, but without a suggestion of atmosphere, and utterly false in values, including only dark, half dark and light, without a trace of middle tint and half light.

A. B. MACFARLANE is the most prolific, showing thirteen slides, of which "The Road by the Stream," 45, is probably the best. Subject and light are admirable, and the shadows on the water effective, but the road is simply clear glass, as is also the sky. "Looking Down the Niagara," 18, although not so good a subject is a better slide, simply because it is sufficiently fogged to lower the tone of what without it would have been false whites.

R. F. SMITH sends nine, all with one exception pretty to look at through a magnifier, but on the screen flat and feeble, from lack of contrast. The exception is "The Start," 29, in which the values are really true, and the sky fine. It is difficult to understand how one that can make such a fine slide should care to show the others.

GEORGE W. DAVIES is fairly successful with night work. "A Winter's Night," 50, is clever and effective, and in a style unique. "Vigor Square, Illuminated," 49, is also good, and especially so is "H. M. S. Talbot," 47. His efforts are highly creditable, and more than fairly successful, but "Canadian Blossoms," 41, is practically a failure, so feeble that on the screen the features are hardly discernible. It only needed longer development to be one of the most charming slides in the set.

J. H. FELLOWS' "H. M. S. Renown," 35 and 36, have both fine wavy water, and the toning down of the sky has made them passable, but nine-tenths of the beauty of such slides depend on their having *suitable* skies. In fact they should not be shown without them, either natural or printed in.

NEVIL N. EVANS is very much on the flat and gray side, most of his slides having neither darks or half darks, and his skies and water are merely bare glass.

A. W. COLE is in the same boat. His subjects are well selected, and the negatives probably faultless, but skies, water, roads, and indeed everything on which light falls, are in the slides bare glass. Exactly the same may be said of the slides by R. WILSON, JR., with the exception, perhaps, of "Indian Encampment," 40, which has been slightly stained to a yellowish tone, and is on the screen less offensive.

A. G. LYMAN's "Shrine near Quebec," 10, is hardly as sharp as the subject requires, but a fairly good slide. "An Old Landmark," 16, is an interesting subject

but a poor slide, too white and gray, but one that longer development would have made satisfactory.

THE OTTAWA CAMERA CLUB.

The slides sent by this club are credited also to eight members, and are more uneven than usual, some being of a very high class indeed, while others are far below the average.

J. A. KEELE shows sixteen, some of which had better been withheld. "The Baptistery, Canterbury Cathedral," 46, for example, is simply a flat hazy mass, a confused jumble of gray, too feeble for any kind of light, and "Portions of the East End," 47, is as bad, but from a different cause, simply white and black, from under exposure. "Durham Cathedral," 35, is a fine subject, spoiled as a slide, from under development. "Old Mill," 44, is a very fine subject utterly ruined by bare glass where no bare glass should be.

W. J. TOPLEY has a dozen, all very far above the average, and some of them nearly perfect; indeed, a little less fear of fog, a little more development would have made them altogether so. Such are "St. Marguerite River," 5, and "Government House," 8. "Homath Canyon," 7, is in every respect a champion slide, and, with one exception, by far and away the best in the set.

R. B. WHYTE shows some fine portraits with just a tendency to flatness, especially "Carrie," 17. Greater contrast would have been a wonderful improvement. "A Funny Story," 19, is much better, and "Our Wash Lady," 20, is brilliantly beautiful. His landscapes are all on the bare glass side, and so of little value, except "A Morning at Como," 13, which is as near perfection as anything that has ever been in the Interchange.

W. L. B. ROSS' "Water Sprite," 49, is a thoroughly satisfactory nude, and a slide in which the values are more nearly true than 99 of every 100 slides in circulation.

W. IDK's "Squatters's Homestead," 50, should have had the sky toned down; he never saw a sky whiter than the snow under it.

J. WILSON's "Bit of the Royal Academy," 26, is a fine slide. "Moonlight," 27, is better, and also a picture; but "Hoar Frost," 28, is flat. Hoar frost should have been white, not gray.

C. M. WIGGINS' "In the Daisy Field," 30, is a pretty subject, that would have been better of less white and black. Detail in white dresses is essential in such cases.

C. H. KEEFER has in a "Winter Scene," 31, a fine example of hoar frost, but the bare glass in 32 is a serious fault.

All in all, the pictorial qualities of the Ottawa slides are fully up to the average—perhaps a little above it, and a few of the members are getting an approach to true values; but there is still too much, far too much bare glass, where there should be the very next to none.

Our Portfolio.

[Prints sent for criticism—not more than one at a time—should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.*, and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in THE AMERICAN AMATEUR PHOTOGRAPHER.]

416. E. L. MARSHALL—"Hemlock Falls" is a meaningless jumble of what seems to be masses of rock and splashes of white paper. The subject might be interest-

ing if taken from a suitable point of view, properly focused and sufficiently exposed, but this is none of these.

417. BARBARA CHANNEL.—"All Gone!" A child seated on the step of a stair looking into a saucer which a cat has apparently just emptied, is a little gem, and although only a snapshot, is truer in values than nine-tenths of the pictures that come to us. The expression of disappointment on the child's face, and of innocence on that of the cat, are both so admirable and the photography so excellent, that we may reproduce it.

418. GEO. ARCHER'S "Woodsy" is a subject of no particular interest, neither sharply focused nor sufficiently exposed.

419. E. M. MILLER.—From a number of prints, the result of a trip to Eureka Springs, we select for notice "The Drive to the Onyx Cave." All the others are topographical, and give a good idea of the nature of the locality, and some of the wonders of nature's works, but this might have been found in almost any locality by one looking for a picture, and knowing it when he saw it. It possesses all the qualities essential to a picture except the most valuable—true tonality. The exposure has been so short that to get detail in the darks development has had to be pushed till middle tints and half lights are all high lights. That is, that stones, sand, one side of tree trunks, etc., are all simply white. A longer exposure and careful development would have made this a really fine picture. We shall reproduce it as a valuable lesson.

420. A. W. KNOWLES.—"A Quiet Spot" is a very good photograph of a very uninteresting subject. Rocks and foliage, neither picturesque nor suggestive, are not worth wasting such exceptionally fine photography on.

421. A. W. MARGEDANT.—"Easter Greetings" is not much of a success. A number of plants of various sizes, a basket of fruit and a statue of a child; but they seem huddled together without conveying any idea of system or method, are not so sharply focused as such subjects should be, and not evenly lighted, the basket on the right being little more than white paper, and the flowerpot, etc., on the left almost black. For success in this kind of work there must be careful, well considered arrangement, suitable lighting, sharp focusing and orthochromatic plates and color filter.

422. T. S. HOMANS.—"The Calm Before the Storm" is good, very good, with only one little fault—a rather low horizon, which makes it slightly top heavy. Before reproducing it we would fain trim off one-third of the sky, but unfortunately we should thereby sacrifice the best bits of the fine cloudland. About a fifth additional foreground would have been a great improvement.

423. O. S. LIQNIN.—"Napping" is fairly good as far as it goes, but it does not go nearly far enough. Portions of two cats resting on nothing and with nothing behind them but blackness. Try it again, but arrange the light and expose long enough to show that the pussies are whole and lying on something, rather than only bits floating in darkness.

424. J. M. HURST.—"Rustic Bridge" is of excellent technique, a nearly perfect photograph of the "record of fact" kind; and as a picture, a perfect example of "how not to do it." The bridge forms a horizontal line right across the print, and vertical lines are repeated about a dozen times by branchless trunks, and to crown all, and to make matters worse, if worse could be, three figures are placed at about equal distances along the bridge. There is fine material here for a picture, but it would hardly be possible to make a worse use of it.

425. J. F. WILLIAMS.—The unnamed print is of the "impressionist" order, and a little more pronounced than we are inclined to favor; but it has some good qualities, especially the somewhat rare one of fine atmosphere. A sheet of water with foliage clad banks that meet in the distance, and beyond them probably a range of hills; but from the employment of a lens of too short focus for the work, very much dwarfed. The arrangement is satisfactory and the atmosphere effective, but the tone is rather low, and the result, as a whole, rather monotonous. We think slight intensification of the negative would be an improvement; and although "suggestion and not depiction" is a good motto within limits, the limits in this have been just a little stretched. If you will intensify the negative and send us a print from it we shall reproduce one or the other, or perhaps both, as an object lesson.

426. W. K. MITCHELL.—"By the Wissahickon" in selection and point of view is very good; indeed, could not have been better, and, properly photographed, would have been a charming little picture. The exposure has been too short, resulting in too much white and black, and the perspective is apparently very false, from the employment of a lens of much too short focus. When you get a suitable lens, and learn to expose long enough to get true values you will do good work; but never send out a print with a white papersky.

427. MRS. A. A. EMERY.—"Moss Glen Falls" is a fine subject not well photographed. The contrast between the right and left sides is painful, the one being so dark that it is impossible to guess the nature of the foliage, and the other as if dusted over with chalk. Such a subject can be successfully photographed only by carefully studying it out, and finding the hour at which the light is suitable, and then exposing long enough to admit of detail in the shadows coming out, before the lights and half lights have been developed to opacity. A negative that reproduces dark foliage whiter than the white foam of the fall is not worth printing.

428. CHRIS. E. TINGLEY.—"Tommy T." is a style of lighting that is not artistic, and which we do not like. A head $3\frac{1}{4} \times 2\frac{1}{4}$, one side simply white paper without a trace of texture, and the other as nearly black as may well be, without being black altogether. If this was what you intended you have succeeded admirably; but a different method of lighting, or an exposure long enough to have given the necessary detail on the left long before the right got absolutely opaque, would have given a very much better result.

429. LOUIS T. LUNZEN.—"The Day Is Done" is a fine subject, beautifully arranged and photographed, and with careful and suitable printing could be made a really fine picture. The effect of the retiring light on the horizon is exquisite, but the cloud masses on the left and the sky on the upper right are so dark as to be inconsistent with the lower luminosity, and so absolutely false. Pale yellow varnish on the back of the negative where necessary, or dodging the print, would effect a cure, and if you send a print so cured we shall have pleasure in reproducing it. If you send, mark it 429.

430. VERA GOULD.—"The Grotto" is a very interesting subject, but as a photograph it could hardly have been worse. The exposure has been so insufficient that development has had to be pushed till every leaf, and indeed everything on which light was falling, is simply white paper. It is well worth trying again, and from the same point of view, but you must expose long enough to get something like true values or gradation. Natural objects like this are not white and black; in fact there is in them very little of either. The other print next month.

431. FRANK R. MILLER.—"Photographing Miss Fidget" is a new departure for

this correspondent, but one in which he is thoroughly in his element. It is a *genre* picture of very great merit, both in art and technique, and at the same time an amusing and humorous parody on what sometimes occurs in the professional studio when the photographer is weak enough to allow it.

Three ladies, probably grandma, mother and aunt, have brought the pretty little girl, beruffled to the nines, to be photographed; and while she is seated in front of the camera, and the photographer, bulb in hand, watches for the desired expression, they are represented furiously waving their handkerchiefs, as if bidding good-bye to departing friends on an ocean liner.

It is, in every sense, a fine picture, and one in which that most difficult of all photographic difficulties—getting true values—has been better overcome than in anything that he had previously sent. See page 233.

432. HARRY FANSLEY.—“The Fall” is not a success from either a pictorial or photographic point of view. It is “tame,” without contrast, and the nearly equal masses of rock on each side of the water give it a mechanical effect. Photographed from a greater distance, with a light that would give contrast, and more artistically composed, it might have been more attractive.

433. C. E. RANSIER.—“A Summer Day” is a very well selected subject very badly photographed. There is a little black, and all the rest white; white water, white sky, white leaves and branches, and indeed white everywhere on which, in any degree, light has fallen, so that it looks like nothing so much as an outline pencil drawing.

434. W. H. S.—“Out of Sorts,” a boy sitting on a barrel “whittling” a stick, is a good idea well executed, and with more than usually good values. The only objectionable feature is the two vertical lines, one on each side of the figure, in the background. They should have been avoided as distracting elements.

435. MRS. H. A. CLARK.—“A Study” is a very creditable effort at portraiture, in which composition, lighting and values are all satisfactory. The one serious fault is the introduction of the plant and the photograph leaning against it. They show too plainly that they were placed there on purpose, and have a fatally distracting effect. Cover them up and you will see how much the figure gains by their exclusion. Never forget “the beauty of simplicity” in such work.

436. E. A. MACKENZIE.—“Mending the Nets” is a very well selected and arranged subject, but a poor photograph. The distance is admirable, conveying the impression of hazy atmosphere, but unfortunately the haziness has overtaken the boats and figures. They should have been better defined. Contrast is also wanting, the whole print being too flat and gray.

437. MRS. N. M. C. KNAPPEN.—“November Sunshine” is of fine technique, a fine subject, but not from the best point of view. The composition is not attractive. A picturesque creek with leafless trees on the right, bending inwards at an angle of about 45°, and reflected at the same angle in the water. This forms something like a reversed K, the mechanical suggestion of which is fatal to pictorial effect. Then the horizon line is in the very center, where it should never be unless for some *very* good reason. Trimming off nearly one-half of the foreground cures this, but nothing short of a different point of view could improve the composition, and give needed support to the leaning trees. The photography, including values, clouds and atmosphere, is very fine.

438. MRS. J. F. GOULD.—“Two Orphans,” a boy feeding a lamb from a bottle, might have been very much better. The ugly fence of a couple of dozen vertical

lines by way of background, would spoil any photograph. *Any* other position for the boy would have been better than that chosen—he might have been seated with the lamb in his arms, for instance—and exposure and development should have been such as to give *some* contrast in light and shade, instead of the flat monotone of all over gray. It is an example of good material badly used.

439. WILL L. MURPHY.—“An Approaching Storm” has a fairly good sky, the little that there is of it, and very good water, but all the rest has been sacrificed to them. It was hardly a subject for a high horizon; but, having decided on that, in the name of all the arts, why *could* you be satisfied with at least four-fifths of the print simply blackened paper. The exposure has been very much too short.

440. MRS. O. H. AVEY.—“The Violinist” is an admirable bit of work, with just one fault—want of atmosphere, or something, to separate the figure from the background. Pose, expression and composition generally, are all fine; and if only light had been led to the background behind the figure, so as to make her stand out from it, this would have been, in every sense, a masterpiece. Try again on similar lines, and if this fault can be remedied we shall have pleasure in reproducing it.

441. JOHN H. SCOTT.—“Hauling the Seine” is considerably over printed, and from a considerably under exposed negative. From sky and sea it is evident that the day is fairly bright, yet horses and men are as dark as if it had been far into the shades of evening. Intensification might improve the negative. If the wagon *had* to be included, we should not have been left to guess whether there were one or two horses; but the picture would have been more suggestive and more impressive without it, especially if the figures had been larger. It might then have been a very fine picture.

442. HENRY STARK.—“The Last Fork” is a very good rendering of a rather hackneyed subject, an ox team in the hay field. Lines and lighting are good, and especially fine and suitable in the crowning glory of such pictures, the cloudland. But one that does so well should do a little better; good as the picture is, it has one serious fault; the values are not true, or nearly so true as they might easily have been. The trowsers of the men and the shadows under the load were *not* as black as the ink with which the picture is signed, nor the hay, and especially the stubble, nearly so white as they are here represented. A longer exposure, and development in a solution weaker in reducer, would have told a better tale. Read the heading of this column and you will see why we do not notice the other print; but it may be noticed in our next. We shall reproduce this as an object lesson.

443. W. DEARDEN.—“A Break in the Clouds” is excellent in selection; a good subject from a good point of view, but has two serious faults—want of atmosphere and false values. The contrast between the brilliant cloud bank below and the sky above is painfully greater than ever nature in her ugliest moods shows, and equally false is the blackness of the foliage immediately under that mass of light. A longer exposure, or, better still, a much larger stop, might have cured both evils, and especially with something to break up the monotony of the bare foreground on the left, would have made this a fine picture. Judging from the sky, we are disposed to guess that the faults arise from the employment of a much too deep color filter.

444. FAY MERRICK.—“Alone in the Cold” is only moderately successful. It is an example of very fine photography; but, although the figure is well wrapped, there is no suggestion of cold, and her face is altogether expressionless. The lighting and the technique are admirable, but the model is badly in need of training, and the idea of cold in such a well appointed apartment is hard to realize.

445. ALBERT.—"The Water Tower" is a well selected subject but a worthless photograph; worthless from under development and probably, also, under exposure. It is simply a great deal of black and a very little white. Ask a friend to show you a good negative, and do not waste paper by printing till you can make one like it.

446. W. H. BLACAR.—"The Dam" is a fairly good selection, fairly well photographed, but would have been better if the trees had not been so black. Longer exposure would have given better values, although it is better than most of the snow scenes that come to me.

447. J. A. POTTER.—"In the Canyon" is a not very good example of the "record of fact" phase of photography. Its only interest is that it shows a line of railroad on the face of a steep mountain. As a photograph it is so under exposed as to be simply white and black. You should not be satisfied with a print that does not bear some relation to nature, and surely the hillside was not nearly so white, or the foliage nearly so black as you have made them. Neither was the sky as white as the paper on which the print is made.

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tlaga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

THE CAMERA CLUB OF NEW YORK.

During the month of May much was provided for the entertainment of the members. At the regular meeting, on May 9, Mr. U. Nehring exhibited his special adapter, to be inserted between the two lenses of ordinary lenses, whereby the regular focal length is greatly reduced, thus making ordinary cameras available for enlarging or copying purposes. It is a simple lens inserted near the diaphragm with curves so arranged as to diverge or refract the rays as they pass through the lenses. Mr. Holbrook read a short paper on the subject and exhibited specimens of work, which were excellent examples of what can be done. An ordinary lens was fitted with one of these adapters and its effect could be seen on the camera ground glass.

The secretary reported that the 1900 Paris Exposition authorities refused to permit or provide a special art exhibit of photography, as it was hoped might be done, and in consequence the board of trustees of the club had decided not to send any club exhibit, which it was expected might be done in April.

The president opened the envelopes containing the names of the competitors in the Chas. I. Berg prize print competition and ascertained that the prize of the Berg silver cup was awarded to Mr. Arthur Scott, who had the highest percentage. The judging was done on the basis of fifty per cent. for art and fifty per cent. for technique, making 100 as perfect. Mr. Scott's percentage was 74.2. The second man, whose non de plume was "Camerata," obtained 69.2 per cent., and from this they scaled down to the lowest average of thirty-four per cent. through the several fourteen competitors.

The president, Mr. W. D. Murphy, congratulated the club on the interest and success shown in this competition and a vote of thanks was passed to Mr. Berg

and the judges for their work of getting it up and judging. The pictures were on exhibition from May 15 to June 3.

After the meeting the president called the attention of the members to the excellent exhibit of Mr. Alfred Stieglitz's work, hung on the walls. The exhibition extended from May 1 to May 15. It was a very instructive and interesting exhibition and with it was given out a nicely prepared catalogue, edited by Mr. Joseph T. Keiley and illustrated by a photogravure picture of Mr. Stieglitz's Holland photograph called "Gossip, Katwyck," which took a silver medal in New York in 1898, and was in the London Salon of 1896. The composition and lighting in this photograph are regarded as about perfect. The pictures included all of Mr. Stieglitz's early and latest work and were greatly admired. Among his latest productions were illustrations of his method of so-called photographic painting or manipulation, whereby, as he puts it, he does not mind how poor a negative is, he can generally produce an attractive print. His favorite printing process is platinum and with it, by chemical means, he secures different tones and effects, according to the result desired. He had several prints of a single portrait of a lady differently treated to illustrate his idea. A plain print from the negative brought the background into too much prominence. He simply prints on platinum in the ordinary way, then with glycerine and a brush paints over the parts he wishes to exclude. When the developer is put on only the parts of the printed image unprotected by the glycerine appear and the result is a picture with an improved background, looking very much like a sketch instead of a photograph. The picture unacted upon by the developer is subsequently dissolved out in the final acid bath. Then another idea is to tone one part of a print one color and another a different one. This is done by protecting one part from the action of the toning bath with a film like glycerine, subsequently removing it and then developing. Mr. Stieglitz shares with Mr. Joseph T. Keiley the invention of this method. Mr. Stieglitz also shows examples of colored prints printed in red and black bichromate of gum. He is particular to emphasize the fact that he secures these different effects by chemical means and dexterous manipulation. On the same plan he is able to manipulate the sky of a landscape and produce thereby an artistic effect.

On Friday evening, May 12, an exhibition of 138 lantern slides by Mr. Stieglitz was given to a crowded house, Mr. W. D. Murphy acting as lecturer, and in this work, as in prints, Mr. Stieglitz shows himself to be a master. All of the slides were perfect, technically, and artistically were confined most appropriately to the varied subjects represented, which included many of his noted pictures.

On the evening of May 18 Messrs. J. Stuart Blackton and Albert E. Smith, of the American Vitagraph Co., gave an exhibition of moving pictures up-to-date, which was very interesting and successful.

SAN FRANCISCO PHOTOGRAPHIC ART CLUB.

A very interesting demonstration was given the other evening before the Photographic Art Club of San Francisco, by Mr. Rea, the president, in the way of "hurry up" photography.

He handled the subject in a manner that showed he was accustomed to his work. In this case he endeavored to set a record for the quickest time possible to show a proof, and it will take some pretty lively work to excel his performance. Nine minutes after the plate had been exposed he displayed a proof. While the club members had been led to look for some extraordinary feat, the celerity with which Mr. Rea brought about results made many of them gasp with astonishment. Mr. Rea

first placed on the table five trays. The first one at the left contained developer for the plate; then came the fixing bath. The third held water, the fourth velox developer, and fixing solution filled the last tray. A gentleman was selected from the spectators to act as "model," and a flashlight view of him was secured. Immediately lights were turned out, and Mr. Rea proceeded to "hustle." The plate was placed in the developer, rocked to and fro, and every few moments hastily inspected. The painful stillness in the club room was a manifestation of the intense interest displayed in the demonstration. In a short time the development was declared sufficient and rocking was continued in tray No. 2. After fixing the plate it was washed in running water for but a minute, when it was transferred, face up, to the tray of water, and a sheet of velox paper placed in the water, face down. The two were then lifted together, and a piece of blotting paper passed over the back so as to rub off all excess fluid. Mr. Rea stated that the velox paper required twice the usual time of exposure when wet. He then held it up to a lighted gas jet, and when given the proper exposure it was plunged into the developer, and when the image came to the required clearness it was transferred to the fixing bath. After allowing the print to fix for a few moments the lights were turned up and the time taken. The watches said "nine minutes."

Mr. Rea would like to have record breakers come forward, for he feels that, as the pace has been set, it will be difficult to lower his time.

NEW YORK SOCIETY OF AMATEUR PHOTOGRAPHERS.

This, in both senses, young society, held its first reception, entertainment and ball in the Jefferson Hall, Brooklyn, on the evening of April 27, with a result highly gratifying to the management.

The reception was followed by an interesting programme of vocal and instrumental music, after which dancing was kept up till two o'clock, very much to the satisfaction of all concerned.

MINNEAPOLIS CAMERA CLUB.

This club continues with unabated energy to set an example to its contemporaries. Since our last notice they have had an exhibition of beautifully colored slides, principally of Irish scenery, in which the colors of even the "Emerald Isle" were done full justice to. They were from the collection of, and described by, Mr. D. A. Reidy, and were thoroughly appreciated, and, on the whole, showed the advantage of wet collodion and coloring in oil, over dry plates and aniline washes, as generally employed here.

The annual election, which followed, was attended by a large proportion of the active membership. The old officers were re-elected, as follows: President, H. E. Murdock; vice-president, W. H. McMullen; secretary, C. J. Hibbard; treasurer, J. F. Schlimme. The directors elected were: For one year, Oscar Tucker; for two years, L. J. Skinner; for three years, George W. Beach, C. A. McCollom. The reports of the treasurer and secretary showed the club's affairs to be in a flourishing condition.

Other Wednesday evenings were occupied by an exhibition of local slides, and an exhibition of prints by Mr. W. C. Hervery, probably the best collection of photographs of American Indians in existence.

THE CALIFORNIA CAMERA CLUB.

On May 16 the club held a lantern slide exhibition of the interchange slides of the Photographic Society of St. Louis and the Buffalo Camera Club.

The club has lately tried the experiment of over night outings with success. The members go in groups of friends, and sleep in tents; bags of straw are sent and are used in place of mattresses to sleep on. The tents are pitched convenient to some good hotel, where meals are had. The last outing was made to Glen Ellen on May 20 and 21, 1899, a pretty spot located in the little Sonoma Valley. The object is that pictures may be made in early morning, when lights and shadows are at their best. An out-door lantern slide exhibition was arranged in the evening for the benefit and amusement of the inhabitants in that vicinity. This club usually leads in the matter of outings.

THE CAPITAL CAMERA CLUB.

We have to thank the secretary of the Washington Club for a copy of the catalogue of their eighth annual exhibition, from which we see that it included 310 exhibits by fifty-five exhibitors, fourteen of whom are ladies, but if we were to judge from the thirteen half-tone illustrations, which would hardly be fair, there was a lack of really good work.

Silver medals were awarded to Messrs. Archer, Holt, Jenkins, Daw and Mullett; and bronze to Messrs. Draper, Peabody and Batchelder and Miss Fallon. Honorable mention was given to Messrs. Fairman and Babcock.

The catalogue is neatly got up, and although there is quite a plethora of advertisements, the executive have had the good sense to keep them in their own place, at the end of the book, and not mixed up with the catalogue matter proper.

OUR ARTISTIC COMPETITION PRINTS.

This set of prints formed quite a valuable aid to the exhibition of prints given by the Helena (Montana) Camera Club, December 27 to 31, 1898. The exhibition was representative of the work of different clubs in the State and for that section was decidedly successful. The *Anaconda Standard* in its criticism of the exhibition says of these prize prints that "it is an educating study of itself. One is struck by the simplicity of the composition of the work more than by the elaborateness of the subjects chosen. For instance No. 7, 'Before the Storm,' in which a single feature expresses the whole thought so vividly that one can feel as well as see the scene." Altogether there were 300 prints in the exhibition. One of the officers of the club says regarding our "Prize Prints" "We had much pleasure in seeing what others have accomplished with the camera."

The set comprises about forty-one large photographs, mostly 8 x 10, mounted on heavy cards. They are welcome to be used by any of the clubs interested in promoting their own exhibitions. Applications should be sent to Mr. F. C. Beach, 361 Broadway, New York.

Our Table.

THE HALLER-KEMPER Co., of Chicago, send us samples of several new preparations that will be welcome to photographers of all classes, and especially to the amateur. They include a sensitizing solution suitable for all kinds of material—paper, cotton, silk, etc.—easily applied, and giving beautiful prints with the least possible trouble; a new tube developer for velox, that gives exquisite blacks; a "Tonefixol," that by simple solution makes a combined bath that is said to yield

prints that are both beautiful and lasting; and a new developing paper, "Kruoxo," that will be found a valuable addition to the *materia photographica*. All of these we shall put to the test of practical work, and report fully in our next.

"THE INTERNATIONAL ANNUAL."—From some, as yet, unexplained reason, this always interesting annual only now comes to our table. We regret this all the more as, being so full of good things, the sooner we could recommend it to our readers the better. Of the eighty-three contributed articles, there is not one that does not contain some useful hint or wrinkle, and many of them include information to be found nowhere else. In addition to the usual tables, it is profusely illustrated, many of the pictures being really good. It contains, however, something that should be taken to heart by all who are in any way interested in the convention of the P. A. of A. We allude to the several reproductions of the convention pictures; and with all due allowance for loss in reproducing, we are constrained to say that the judging that could award prizes to such is not of the right quality.

"THE SHUTTER," the Shutter Publishing Co., Frankfort, Ind. This is a twelve-page octavo monthly, published in the interest of amateur photographers, and with a view to "boom" the "A. A. P. A.," the American Amateur Photographers' Association, an organization intended to bring about a closer fellowship among the thousands of amateurs throughout the country.

The little magazine has big aims, among them the printing of such approved formulæ as may be sent by its readers; but if those that appear in this issue may be taken as a fair sample, they will be sadly in need of better editing. There is in this number a formula for a combined bath of four ounces, containing one ounce of hypo, and *sixteen* grains of gold, which is said to be sufficient to fix and tone two dozen 4 x 5 prints. Two-thirds of a grain of gold to each 4 x 5 print would make printing a rather expensive business.

But we heartily welcome the little magazine. There is always room, but the editor must remember that it is only at the top, and that formulæ especially need looking after.

"THE PHOTOGRAPHIC PRIMER," by J. C. Worthington and J. C. Millen, M.D., Riverton, the Riverton Press. The authors have not aimed high and have probably reached the height of their ambition. The information, so far as it goes, is all right, and it goes far enough to help the beginner to at least make photographs. There may have been wisdom in refraining to such an extent from burdening the tyro's mind with anything beyond the mere manipulation, but it would have been better to have refrained from theory altogether, as the only approach to it that we have noticed is an ex-cathedra statement on a subject that neither they nor we know anything about—the nature of the latent image. In speaking of the dry plate, they say "the light, coming in contact with this coating, *oxidizes* the salts of silver and blackens it, and this change is developed or brought out by the developer." And again, "the silver salts of the emulsion coating having been *oxidized* by the light, the developer sets its seal on the work, and by its chemical action completes the process, causing those *oxidized* spots to become black." The italics are ours; we have heard of the "physical" theory and the "sub-bromide" theory, but the oxidizing theory will be as new to others as it is to us.

But, as we have already said, except for that little mistake, the instruction is plain, practical, and to the point, and quite sufficient to enable one, not quite a dunderhead, to make photographs.

ONE MAN EXHIBITION.—From the New York Camera Club comes an invitation to visit an exhibition of pictures by Mr. Stieglitz, accompanied by one of the most tastefully got up catalogues that we have yet seen. In an interesting preface, written by Mr. J. T. Keiley, we are told that the exhibition of the eighty-seven pictures—and they are pictures in every sense of the word—is the result of fifteen years' struggle in the field of pictorial photography; and as the dates of their production are recorded, and some of them go as far back as that, the exhibition has given visitors the rare opportunity of watching the artistic progress of this acknowledged master of the art.

But as even the preface to a catalogue may help to make history, there is one statement in this to which we must take exception. It is true that in its earlier days photography was more in the hands of the scientist than the artist; indeed the former *had* to be the forerunner of the latter; but it is not true, as the writer asserts, that fifteen years ago pictorial photography was in its infancy. There were artists in those days, and long before them, as well as now; and even twice fifteen years ago pictures had been produced by photographic means quite equal in all that appertains to art to any one in this splendid collection.

NEHRING'S COPYING AND ENLARGING LENS.—Photographers with only one lens have long been in the habit of lengthening or shortening its focus by inserting, generally close to the stop, either a negative or positive supplementary lens, more frequently than not a simple spectacle "eye." Several opticians have made achromatic lenses suitably mounted for the purpose, and indeed such a lens or lenses are part of the equipment of at least one popular hand camera, the Frena.

By far the neatest thing of the kind that we have seen is the "Copying and Enlarging Lens" being put on the market by U. Nehring, of New York. It is an achromatic meniscus of about three inches focus and $\frac{5}{8}$ inch in diameter, mounted in a ring of hard rubber so as to lie snugly close to the stop between the lenses of any of the ordinary doublets, and thereby shorten the focus to an extent dependent on the length of the lens without it. If, for example 6 in., the average length of those supplied with 4 x 5 hand cameras, it will be reduced to 3 in., in which an object placed at a distance from and in front of the lens may be photographed the size of itself, that is, providing it is within the dimension of the 4 x 5 plate.

The Nehring supplementary lens will give additional power to the photographer with only one lens, and is beautifully got up in a velvet-lined leather case that may be carried in the vest pocket.

"THE PHOTO-MINIATURE."—The second number of this unique magazine, unique in that, instead of butterflying from subject to subject, it contents itself with only, or at least mainly one, and of that tells, and tells plainly and thoroughly, all that it is really necessary to know. This has as its *motif* "The Pose in Portraiture," and it is dealt with in a way that should make it very welcome to both amateur and professional.

From Andrew J. Lloyd & Co., of Boston, comes a catalogue and price list of everything connected with photography and some things that are not, but things which every photographer who sees them and the prices at which they may be got is sure to feel that he cannot be quite happy till he gets them.

The 210 pages of the catalogue proper seem to include everything to be found in other catalogues, and many things only to be found in itself, and the remaining seventy-nine pages are devoted to a simple guide for beginners, a series of most useful tables, and a lot of well selected and approved formulæ. It includes also one

important feature not usually found in such lists, a discount sheet which places the novice in as good a position as the experienced buyer, and should of itself be a sufficient inducement to photographers generally to send the twenty cents which is charged for it.

"THE AMERICAN MONTHLY REVIEW OF REVIEWS."—We have often said that the *Review of Reviews* is the most welcome of all the magazines that come to our table, and that to a photographer, and especially one of limited leisure, it would prove the friend in need; as, in addition to keeping him thoroughly up to date in all the world's happenings, or telling him where they are more fully recorded, it contains in every number a perfect gallery of portraits—the May number, for example, contains thirty-eight—from which inspiration can be obtained, and the styles of the best men learned.

Letters to the Editors.

TOLIDOL VS. METOL.

DEAR SIR: I was very much surprised to read the contribution of Louis l'etrie to your Contribution Box. As Mr. Petrie did not give his address I am not in a position to investigate his motives or his connection with Tolidol. Anyone reading the article cannot fail to detect the evident motive of his article; to advertise a developer which is parading under false colors.

Tolidol is not a new developing agent, and Mr. Louis Petrie had better look out for those delicate (?) fingers; for the simple reason that the *active principle of Tolidol is metol hauff*. This excellent developer has made so many friends that there are new (?) developers springing up every day, which when analyzed show that they are made of metol hauff with a greater or less part of hydroquinone or other similar assistant or cheapener.

I have frequently made the statement that Tolidol was not a newly discovered developer but merely a mixture of metol hauff, hydroquinone and citric acid, and Mr. Petrie shows very clearly that he accuses metol hauff very wrongfully, by the fact that he attributes to it in the one instance certain faults and then states plainly a few moments later that they don't exist.

If my amateur friends are inclined to believe that they can get better results from a mixture of metol and hydroquinone of about one-half the energetic power of metol hauff, why don't they mix it themselves and not pay double price for it under some other name.

G. CHARLES GENNERT.

[As is our custom, the makers of Tolidol were given an opportunity of replying, in response to which we received the following.—EDS.]

DEAR SIR: Some foreign manufacturers and their representative importers, who have long held a monopoly in photographic chemicals, seem incensed that Americans should presume to enter the field, and exhibit spleen in advertisements and other fair means of publication, as well as by some contemptible underhand methods, Tolidol being at present their chief object of attack.

That persons holding such prominence in the business should deign to notice our products, even going so far as to name them in their own advertisements, implies a high compliment, for which we are very grateful.

One well-known party tries to borrow some of Tolidol's popularity by making

what he claims to be a substitute for it at a less price. Beware of substitutes issued by one who convicts himself of unfairness. Either he has put a new name on his same old goods and reduced the price, or he has changed the goods. If the former, it admits the fear of a competitor; if the latter, it is a confession that he himself is not satisfied with his old product. Tolidol has waked him up.

The same party claims that our goods contain his, and yet complains of it. Would a manufacturer fight one who bought goods from him and sold them again by extensive advertising and other expensive effort; it would simply be marketing the goods for him, and the quantity of Tolidol being daily consumed all over the United States would be just that much greater sale of his goods, to which he would object, eh?

By a pretended exposition of our formula he blandly invites us to refute his trumpery by publishing our real formula. Thanks, the bait is somewhat transparent.

Without further argument we submit that their own statements show Tolidol to be worth attention, and there can be no greater proof of its merits than the desperate efforts made by importers and foreign manufacturers to discourage its use.

CHICAGO CHEMICAL WORKS.

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander & Davis), Washington, D. C., from whom copies of the patents may be had.]

LECLAIRE STARK, Milwaukee, Wis.

Panorama Camera.—No. 621,545.

A revolvable casing carrying lens is employed, and within this is mounted a revolvable roller over which the film passes. Mechanism is provided to rotate the roller and casting simultaneously.

A. GOODER, Brookville, Pa.

Developing Apparatus.—No. 622,141.

A tray is employed, having mounted therein a pair of separated horizontal rollers. Vertically adjustable standards are provided carrying a roller and crank. The film is passed around these rollers and its ends secured together, and the crank is then operated.

LYNFORD WREED, New York, N. Y.

Camera.—No. 622,315.

Two telescoping boxes are employed, one of which carries the ground glass and plate holder, the other carrying the lens and shutter. The shutter consists of a vertically movable spring-controlled plate having an exposure aperture.

O. B. DEPUE, Chicago, Ill.

Kinetographic Camera.—No. 622,451.

Comprises means for continuously moving the film, and means for giving a portion of the film an intermittent motion. The invention lies mostly in the form of this latter means.

L. H. WALLACE, Ogden, Utah, assignor to Gundlach Optical Co.

Focusing Attachment for Cameras.—No. 622,574.

A mirror frame is hinged to the bottom of the ground glass frame, and to the mirror frame is hinged a hood frame, and a lens is mounted in the hood. When

extended the ground glass is reflected in the mirror and may be seen through the lens. When folded the parts fit within the camera back of the ground glass.

WM. N. MILLER, Bayonne, and G. P. RICE, Plainfield, N. J., assignors to the Excellograph Co.

Photograph Projecting Machine.—No. 623,410.

The film is provided with perforations along both its longitudinal edges. Two toothed wheels, one for each edge of the film, are provided, the teeth of said wheels engaging the perforations in the film. Means are provided for simultaneously rotating said wheels and for automatically stopping them when the film has moved the required distance, said stopping mechanism being actuated from the driving shaft at the pre-determined point.

D. C. S. SCHULTZ, Hencke, Berlin, Germany.

Printing Process.—No. 623,401.

The method consists of developing the negative in a strong developer, washing it for a short time, immersing the rinsed negative in an aqueous solution of potassium bromide, placing a sheet of sensitive paper upon the unfixed plate while still wet and pressing it closely there-against, exposing the negative and paper to the light and finally removing the sensitive paper and developing, fixing and washing the same in the usual manner.

P. BOYER, Paris, France.

Flash Lighting Apparatus.—No. 623,874.

A table or plate is rotated by means of a clock spring and is controlled by electrically actuated stop devices. The plate carries a series of cups to contain the flash powder and electrical means is provided for firing the charges when the charge to be fired is at a certain point in the revolution of the plate. The electrical apparatus permits the apparatus to be actuated from a distance.

GUSTAVE BOULLAND, Macon, France.

Lighting Apparatus.—No. 624,164.

A cabinet provided on its face with an upwardly and outwardly projecting deadened glass portion and above said deadened glass portion with an inclined top of clear glass. Means are also provided for producing artificial light within the cabinet. The cabinet is mounted on vertical pivots so that the light coming through the deadened glass may be projected in any direction desired.

Answers to Correspondents.

[Correspondents are requested to notice that communications intended for the editors, from July 1st to September 15th, should be addressed to DR. JOHN NICOL, *Point o' Woods, N. Y.*, where he will, as usual, give instruction in the theory and practice of photography.]

ATHELLE BELL.—We are always glad to assist in any way we can legitimate clubs or associations in connection with photography, but can hardly be expected to indorse a club in connection with which remittance of cash is an essential feature, on the request of an unauthenticated and unknown correspondent.

A MANUFACTURER.—If, as you say, the article has been in use for several years, and frequently described in the journals, you may consider yourself at liberty to make and sell it, notwithstanding "Patent Applied for," or even although the patent had been granted. Patents are often taken by those who know that they are not valid, and who would not attempt to defend them, merely to be able to advertise the articles as patent.

WILL H. HARPER.—An "8 x 10 lens" means only that the optician who so marked it knows that it will cover, it may be more or less perfectly, that size of plate. Tell us its focal length, and we shall be able to advise you.

MARY SEYMOUR.—We have not seen the lens, but can assure you that the claim made for it cannot be sustained. When a dealer tells you that of two lenses working at the same aperture, one is twice the rapidity of the other, you may be sure that he is either ignorant of what he should know, or is trying to mislead you. The lens you mention, with a working aperture of $f/6$ will be found quite equal to your necessity; but No. 1, although it may cover the plate sharply to the edges, is of much too short focus for your work. No. 3 would do fairly well, but No. 4 would be very much better. The style of portraiture to which you aspire is the noblest phase of pictorial photography, but much, very much, will depend on the proper training of your models. Don't hesitate to send examples of your work; we are always glad to help those who are willing to be taught; but for the sake of both our eyes and our time, try to write plainer; we really cannot afford time to guess and guess at your meaning.

MAD BULL.—You are knocking your head against a stone wall. How can you get a remedy for what is not a fault? The amateur has shown himself your friend rather than your enemy. You say he sent his friend to you, who ordered a dozen photographs and paid for them, and then he (the amateur) made an enlargement from one of them, for which he was paid six dollars; but by what stretch of imagination you can call that robbing you is beyond our comprehension. The amateur did you a good turn in recommending his friend to employ you, and the photographs that friend paid you for are surely his own, to do with as he pleases. It is true that the negative is yours, but only in the sense that the type from which the magazine is printed belongs to the printer, and you have no more right to print from it, except to the order of the sitter, than he has to print extra copies of the magazine, except to the order of the publisher.

JOHN H. ANDERSON.—The limited guarantee is doubtless intended for self-protection, and certainly does not mean that the films will not keep beyond the time limit. Since your question came to hand we have exposed one each of Carbutt's orthochromatic and "special" cut films, dated October 28, 1896, and they were in every respect as perfect as when they were received, two and one half years ago, and have resulted in negatives of a quality equal to anything that we have ever developed.

W. & B.—Yes, using the quantity of gold you do, you will save money by making it. It is not necessary, if you dissolve coin, to separate the alloy; it will do no harm. Dissolve the gold in "aqua regia," by gentle heat; a sand bath on the kitchen stove answers very well, and a "Berlin porcelain" evaporating dish is convenient. When solution is complete evaporate carefully to dryness, stirring constantly, employing no more heat than is necessary, and stopping as soon as the acid is nearly, but not altogether, driven off. Then add water sufficient to make the solution of the strength of one grain to each drachm, taking it for granted that for each 100 grains of metallic gold you will have 150 grains of chloride, Au Cl_3 .

MARY L.—We have seen some of the so-called sacred art, or photographs of religious subjects, and read much of the discussion they have evolved, but positively decline to discuss it or let it be discussed in our pages. Our advice to you is to keep as far from it as you would do from one affected with leprosy. The nude is different. It *may* be nobly portrayed, but it is risky, very risky; and unless you are *very* sure of your own ability you had better, far better, leave it, too, alone.

V. K.—(1.) We have never seen Seed's, or indeed any other plates "crack and peel" in the way indicated, and cannot suggest a cause; of course, if the injury is great there can be no remedy. You should write to the plate makers; they will thank you, and may be able to help you. (2.) Amidol is not so much used as many of the other so-called "aromatic" reducers, mainly because it does not keep well in solution. The "M. Q." developer, issued by the Nepera Co., is, in our opinion, a better developer for all varieties of velox paper. You will find the formula on page 69 of our last year's volume. Diluted with half its volume of water, this will make a good developer for all makes of plates; but at present we prefer either ortol, metol, or tolidol, and the following formula will do for either:

A.	
Ortol	120 grains
Potassium metabisulphite.....	60 grains
Water	10 ounces
B.	
Sodium sulphite (crystals).....	2 ounces
Sodium carbonate	2 ounces
Potassium bromide	20 grains
Water	10 ounces

For a normal developer take one part each of A and B, and two parts of water. For known over exposure A should be increased and B diminished, and for under exposure the reverse. (3.) There is no work on "dodging" the negative, but very much may be done in that way. We have a series of articles in preparation that will give you just the information you want.

H. D. ALLISON.—Your 9½-inch lens, no matter what it cost, or how good it is, is, for pictorial purposes, not fit for a plate larger than 4 x 5, or, at most, a half plate. Study carefully the article on lenses on page 534 of our December number, and you will learn the reason why.

J. A. ANDERSON.—You will see from the article referred to that the tank development is intended for shutter exposures, and as they are more or less under exposed, none of them will be overdone at the end of six or eight hours. We place the plates face all one way, and if we want to lift one, it is done with a bent silver wire. In pouring out the various solutions, or the washing water, we place our hand over the whole lot, and so keep them from slipping out.

ARTIST.—We are not sufficiently acquainted with the painting of backgrounds to advise you, either as to priming, or the preparation of the colors to be employed.

W. L. WYMAN.—We like metol very much better than either of the reducers you mention. Formulæ is merely indicative, not imperative; the man is of more importance than the mixture. There is none better than that given by the maker, to be found wrapped round each bottle. We, however, prefer it a little weaker, say to add about one-third more water. The formula given by the velox people, to be found on page 69 of our number for February, 1898, is suitable for all kinds of developable paper, but may be diluted with advantage.

D. J. DOWNEY.—"Expose to eight inches of magnesium wire a distance of four inches" means that eight inches of the wire is to be burned at a distance of four inches from the printing frame; that quantity giving the exposure necessary for the desired result.

Glossy



and Matt.

The Self-Toning Paper

IS GOING TO STAY, THE COMBINATION NOTWITHSTANDING!

SELF-TONING PAPER

A BOON TO AMATEUR PHOTOGRAPHERS.

is what makes this paper by far the most desirable for use by Amateurs. Takes but ten minutes *from the Printing Frame through the Fixing Bath to the Wash Tray. No Intermediate Processes. Finest Carbon Effects* (black and white). Send postal for folders giving full information of this superior paper to

Simplicity, Celerity and Durability combined with economy,

FRANK M. POTTER, 611 Broadway, New York.

Outing is as wholesome in spirit as the breath of a pine forest, and a constant inspirer of a love of nature.—NEW YORK TRIBUNE.

The summer numbers of

Outing

offer many suggestions to the amateur photographer, and contain many accounts of pleasant excursions over all parts of the world.

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SALE AND EXCHANGE.

[This department is for the benefit of SUBSCRIBERS who have photographic material, apparatus or books which they wish to exchange, and such wants will be inserted free of charge one time. For each additional insertion we will charge one dollar per month. Dealers advertising in these columns will be charged double our ordinary advertising rates.]

For Sale—Zeiss lens, $6\frac{1}{2} \times 8\frac{1}{2}$, Series II.-A with B. & L. diaphragm, aluminum shutter; in perfect condition and a splendid lens, for \$45.00 cash. Will send C. O. D. with privilege of examination. Address Andrew Emerine, Jr., Fostoria, O.

For Sale—A $6\frac{1}{2} \times 8\frac{1}{2}$ Folding Hawk-Eye and 3 plate holders, fitted with a Ross Universal Symmetrical Extra rapid lens and Bausch & Lomb Iris diaphragm shutter; cost price, \$135.75; will sell for \$65. This camera is in a very good condition and the lens extremely fast. Also a 8×10 Beck autograph rectilinear lens; cost price, \$60; will sell for \$30. This lens will cover a 12×15 plate sharply to corners. A. Burnton, 49 Sixth Ave., N. Y. City.

For Sale.—A $6\frac{1}{2} \times 8\frac{1}{2}$ Blair compact camera and 3 double plate holders, also 8×10 extension and 2 double plate holders, tripod and carrying case, all in excellent condition. Edmund A. Darling, P. O. Box 439, Providence, R. I.

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Wanted—Camera 5×7 , $4\frac{1}{4} \times 6\frac{1}{2}$ or 4×5 , latter preferred; good make; folding type, with tripod and plate holders, high grade rapid lens and shutter. Send full particulars and quote very lowest cash price to Box 101, Crafton, Pa.

For Sale—One 5×7 Premo, Sr. special camera fitted with Bausch & Lomb Shutter and Zeiss Series II.-A Anastigmat lens, case and tripod, good as new. Cost, \$95.00; will sell for \$50.00. R. S. Kaufman, Scranton, Pa.

Wanted to Exchange— 4×5 Adlake Camera and three joint sliding Tripod in good condition; cost \$15.00; Washburn Mandolin, good condition; cost \$25.00; for 5×7 Tele. Photo Poco; will pay difference. C. A. Prickett, Auburn, Ind.

For Sale—One 4×5 Rochester Optical Co. Handy camera, with 2 double plate holders, all in good condition; cost \$9; will sell for \$5. Also, one 4×5 Magazine Cyclone camera, nearly new; cost \$10; will sell for \$6.50. Address E. C. Dymond, Libertyville, Ill.

For Exchange—A 12×15 Laverne Achromatic lens, good for studio and outdoor work; also, a 11×14 single landscape Darlot lens, both in good condition, to exchange for a good and complete 5×7 outfit. Address Morris S. Heagy, Rock Island, Ill.

For Sale— 5×7 Rochester Rapid Symmetrical lens, $8\frac{1}{4}$ in. focus, fitted with Unicum Shutter, with focusing scale and bulb, new this spring and never used; cost \$24; sell for \$12; send on trial; will exchange for 8×10 lens or box. Address W. J. Yeager, Salem, Col. Co., O.

For Sale—A new 4×5 outfit, never used; one 4×5 Premo Pony A lens, Goerz No. 2, Series No. 3. with Goerz section Shutter, 5 plate holders and carrying case; cost \$92; sell for \$50; or exchange for anything of value. H. D. Barton, 21 Third street, Rochester, N. Y.

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No. 455-

By J. F. Williams.

"MOONBEAMS ON THE WATER."

THE
AMERICAN AMATEUR PHOTOGRAPHER.

VOL. XI.

JULY, 1899.

No. 7.

Obstructions to Progress in Picture Making.



No. 198.

By F. R. Archibald.

"THE WHALEBACK."

WE reproduce No. 381 of "Our Portfolio," "The Parting of the Ways," with a purpose, to serve as a text for a short sermon on certain obstructions that to a considerable extent interfere with our efforts to help the less advanced of our readers to make pictures, rather than mere photographs. The obstructions are many, but, in the meantime, we shall notice only three. The injudicious praise or approval of friends, the awarding of prizes at a certain class of exhibitions, and the recommendation, and sale, by dealers, and

even opticians, of lenses of much too short focus for the size of plate intended to be employed.

If our readers will turn to our criticism of "The Parting of the Ways," on page 212 of our May number, they will better understand the following extract from the letter of its author. "The lens is a rapid hemispherical of nine and a half inches focus, that, with a Prosch shutter, cost \$55; and is called, by an expert judge of lenses, who has sold and made a study of them for years, a superior instrument. I have made pictures with it this winter, which have won first and third prizes in New York and Chicago, and have been complimented on the selection of this particular view by some well known artists, while it has generally been considered a pretty good picture."

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Here we have an example of all three obstructions occurring in one communication, and shall take them one by one. If a tree may be known by its fruit, "The Parting of the Ways" may be made to tell its own story, and so far as the all too short lens is concerned, it tells it plainly. It is intended to represent two roads branching off at the foreground, but the perspective is so apparently false that instead of the roads appearing to recede as they ought to do, they stop short at a distance of only a few yards. This defect arises from the well known exaggeration of the foreground and the diminishing of the distant objects by all lenses that are not at least once and a half the length of the longest way of the plate, so that nothing shorter than twelve inches could convey a correct impression of this subject on this plate.

On the evil of indiscriminate prize-giving at what may be called lay exhibitions we have spoken several times, but it is an evil for which it is difficult to find a remedy. Such exhibitions are of various classes, more generally than not mere methods of advertising, and the exhibits are of such a class that even the best is but a very poor affair. But it does its work. Its author is a prize winner; and too often, alas! he seeks no farther improvement, and turns a deaf ear to those who are better able to advise him. Nor are exhibitions of a much higher order always free from the same evil influence. The exhibits, or many of them, may be of a high order, but the awards are sometimes made on a false basis. Technique may be placed before art in its true sense, or the eccentric may be mistaken for art, and in either case the man with the medal sustains an injury from which he will not readily recover.

And lastly, the indiscriminate praise and approval of friends, and especially of friends with some pretensions to an acquaintance with art. This obstruction is probably more serious in its influence than either of the others, or perhaps than both combined. Here again the "Parting of the Ways" proves our contention. There are certainly two ways, but which is which, and why was the bit of water on the left thrown in? What is the *motif*, and where is the objective point on which the eye should rest, and where is the something that should lead the eye to it? The beauty of simplicity is being more and more recognized, but here, as if determined to disregard it, material for three good pictures are placed side by side, as if not a picture, but a "record of fact" had been the purpose; a purpose that would have been foiled by the apparently false perspective already pointed out.

If the author of this photograph has still a doubt as to the unsuitability of his lens for a base line of eight inches, and we know how hard it is to see faults in a picture that we have been led to think fault-

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JUL 6 1899



"THE PARTING OF THE WAYS."
BY
HENRY D ALLISON

No. 381.

less, especially when that picture is our own, he should photograph a village street from the middle of the road, and if that does not convince him nothing will, as the street will be represented as being broader than it is long.

To those of our readers who aim at picture making we would say, do not attach any importance to awards at exhibitions; remember that when the optician lists a lens as, say, a 12 x 10, he means only that that lens will cover that size of plate, and does not, in any sense, imply that such an arrangement is suitable for pictorial work, and, above all, do not in any way be influenced by the praise and approval of friends, often ignorant of even the first principles of art, and always partial or anxious to please.



MR. GRIFFIN, Director Detroit Art Museum, says: "The snap shot has no place in art; it is simply a field note, and should be kept in its place."



No. 419.

By E. M. Miller.

"THE DRIVE TO THE ONYX CAVE."



No. 456.

By J. Edgar Allen.

"THEY TOIL NOT, NEITHER DO THEY SPIN."

The Primary Colors.

Notwithstanding the marvelous diffusion of knowledge during the latter half of the nineteenth century, there is still in the minds of many a hazy idea of what really are the primary colors; a haziness contributed to a good deal by the opinions of even some of our leading artists who ought to know better. On one occasion we heard the late Sir George Harvy, at a meeting of the Royal Society, and in reply to a beautifully illustrated lecture on the Young-Helmholtz theory, say, "I don't care what your Youngs and Helmholtzes say, I have more confidence in my palette, and it tells me that the primary colors are red, yellow and blue." And he was right from his point of view, as will be seen from a little consideration of a very interesting lecture before the Institution of Printers and Kindred Trades, by Mr. Zander, the scientist, in connection with the well known printing ink manufacturers, A. B. Fleming & Co.

The old notion of seven colors in the spectrum has long ago been given up; and although they are now generally spoken of as three there are really five, three color sensations, and two secondary colors. The primaries are red, green and violet, and the secondaries, yellow, a

mixture of red and green; and blue, a mixture of green and violet. There is also a third secondary, a shade of crimson, formed by the mixture of the two ends of the spectrum, the red and violet, and so cannot appear in it.

The primary colors then, or more correctly, primary color sensations, are red, green and violet; and the primary colors of the artist and the printer are the secondary colors formed by any two of these with the third left out. The former are the primary colors proper, the latter the pigment primaries.

Equally hazy, as we know from the queries that come to us, are the notions regarding the colors employed in the three color method of printing; and why secondaries, and not primary, are employed in printing from the blocks. To make this clear we cannot do better than to quote Mr. Zander's words, which we clip from *Photography*.

"Supposing that we interpose a red filter between the object and the sensitive plate we shall then have a record of the red parts, *i. e.*, those parts of the objects which reflect red. The red filter does not permit the green and violet to pass through. Now if we make a positive or transparency from the negative or red record, this positive will be the converse of this red negative, and will be a record of all the violet and green portions of the object which were stopped out by the filter. Now if you call to mind that the combination of violet and green forms blue, you will see that the printing color for the block made from the red positive will be blue, and you will now at once have an idea how we determine the correct hue of the blue which should be used for printing.

"The green filter interposed between object and sensitive plate will record the green rays reflected from the object, and will stop the violet and red rays—it will form what we might term a green negative. A positive made of this negative will record the converse of the green negative, *i. e.*, the red and violet stopped out by the green filter. Now violet and red combined make crimson, which will be the printing color for the positive or the printing block.

"In a like manner the positive made from the violet negative will record the green and red rays reflected from the object, and stopped out or absorbed by the glass filter. The combination of red and green rays produce yellow, and therefore the printing color of the positive or black will be yellow.

The pigment primaries, according to Mr. Zander, are crimson, primrose yellow, and cyan blue; and the success in three color printing will always depend on securing right shades of these, and something approaching true orthochromatism in the taking of the negatives.

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"MOUNT CARDIGAN."
BY
R. A. MILLER.

No 368.



No 417.

"ALL GONE."

By Barbara Chann.

Point o' Woods.

THE PHOTOGRAPHERS' HAPPY HUNTING GROUND.

Before this reaches the eye of our readers we shall be enjoying the pleasures of our summer home at Point o' Woods, which we have characterized as the Happy Hunting Ground of the photographer; as he will there find food for the camera, of a kind, or rather of many kinds, of such quality as is not to be found in any other part of the country.

Point o' Woods is a part of the long strip of sand dunes lying between the Long Island Great South Bay and the ocean; beginning some four miles east of Fire Island and opposite the widest part of the bay, and where the beautiful shrubbery and heavier timber begins. Although only white sand, arranged in picturesque dunes, they are everywhere so clothed with vegetation of innumerable varieties, some of it to be found nowhere else, as to be a charm to the botanist, and a delight to every lover of flowers. It includes scrub-oak, holly, firs of various kinds, wild roses, that during June and part of July cover the dunes as with a carpet; the decorative deer feed with its crimson berries; the assertive but attractive marshmallow, and the diminutive beach plum, that may be gathered by the bushel, and makes most excellent jams and jellies.

We have never taken much interest in flower photography, but for those who do we append a brief list taken from a small herbarium, made

by the teacher of botany in the summer schools, the late Mr. George R. Howell, who was wont to say that Point o' Woods was the botanist's Paradise:

Goldenrod, Smilax, Brambles, Fire weed, Snap dragon, Asters, Convallarias, Whortleberries, Leather weed, Horehound, Evening Primrose, Yarrow, Boneset, Artemisia, Asclepias, Chenopodium, etc., etc.

On the south is the Atlantic Ocean, food for the photographer, in all its various moods; sometimes as quiet as a lake, and at others sending the surf as high as the cottages on the ridge that keeps it within its bounds. Here he may get scenes on the sands to his heart's content; in groups or single figures, and in all possible attitudes and garbs; or he may, at the distance of a few yards, catch the daily drill of the Life Savers at the Life-saving Station, divided from the grounds only by a wire fence.

On the north is the Great South Bay, with its hundreds of white sails skimming along its surface, "white wings" of all shapes and sizes, some on pleasure bent, some tempting the denizens of the deep, and going leisurely along, and some "clamming," and therefore standing still; all working together to give the photographer opportunities of catching such compositions as are hardly to be found in any other place.

And then, the glorious sunsets. Only a poet, which we are not, can do them anything like justice; and hundreds who have seen the sunsets of



No. 403.

"THE HERMIT COBBLER."

By Geo. Lee Hays.

other lands, and of the most favored places in this, declare that none of them can compare with that at Point o' Woods. It is not the sunset alone but the combinations, the foregrounds and middle distances; the dunes, the scrub-oaks, and the continually passing boats, that give an additional charm to the glorious display of color and cloud formation. For the so-called "Moonlight" effects, nowhere on earth can the conditions be more favorable. When the sun is at the most suitable altitude, the dunes, the dock with its forest of masts, as is sometimes the case; and the continually passing and repassing sails, must fully satisfy the most exacting photographer.

Of the people that fill the three hotels, and the well on to a hundred cottages I need say nothing, except that they are not exactly the kind usually to be found at summer resorts; not the gay and giddy, but rather the quiet, intellectual; with whom it is a delight to form lasting friendships. But they have all one thing in common, a willingness to be photographed, and to do their best to help the photographer to make genre studies.

Taking it all in all, Point o' Woods is, as I have called it, in every sense the photographer's happy hunting ground, and when he tires of photography, or wants a change of occupation, he may give a little time to study; as he will find masters and mistresses ready to teach him almost anything that he does not know, including mathematics, languages, music, voice culture, art, with a big A, if he likes, swimming, and even dancing; and last but not least, photography, which is under our particular care.

Of course, we should like to see as many of our friends as possible enjoying themselves at such a desirable place, but those who cannot do so, and wish to communicate with us, will please remember that from now up to September 15, our address will be Point o' Woods, N. Y.

We had almost omitted to add, for the sake of those whose lines are cast in places where they suffer from heat, that we have taken the temperature, at 8, 1 and 6, for five years, and that the average is 72.5 Fahr.

IN reply to questions that come to us every day, and will continue to come, we make the following general statement: The best book for a beginner is "The Right Road to Photography," by ourself. The best lessons on art are to be found in "Burnett's Essays," and the best lens for all round work, is one of the "Rectilinear" type; but it must have a focal length of not less than once and a half the length of the longest way of the plate.

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"CAT'S CRADLE."

BY

NELLIE M. C. KNAPPEN.

One of a series of pictures awarded First Prize, Class A., AMERICAN AMATEUR PHOTOGRAPHER
Beginners' Competition.

The Photographers' National Convention.

Are you with us? is the question asked by the executive, of every photographer in the country, and everyone who by hook or by crook can see his way to it should have no difficulty in answering in the affirmative. Each knows best how his own shoe pinches; but the photographer who is true to himself, and wants to do the best that he can for his employers, will let no light reason keep him from Celeron during July 17 to 22.

Photography is progressive, to an extent that those who stay at home cannot know, and there is no place where that progress can be so well recognized as at the convention. He who knows most has still much to learn, and he will learn it better there than he could anywhere else; as hardly in any other place, and certainly under no more favorable circumstances, could he be placed in a more receptive mood.

If we could have the ear of the whole fraternity, we should say, go to Celeron, on the banks of the beautiful Lake Chautauqua. If you are sick, it will make you well; if you think you cannot spare the money, we assure you that it will be returned to you after not many days; and if you have not the money, then borrow it, certain that it will be returned to you tenfold.



No. 38a.

"THE LOG CABIN."

By E. W. Tanner.



No. 222.

"THE CALM BEFORE THE STORM."

By T. H. Homans.

A Home-Made Exposure Meter.

Reliable exposure meters are cheap enough, yet we know that there are those who have more pleasure in what they can make for themselves than in anything that they can buy. In our March number we described one sufficiently simple for anyone to make, and now we give another, from *Scranton Mechanic Arts Magazine*, equally simple and perhaps a little more convenient, and that can be arranged to work with any of the ordinary "Aristo" papers, such as Albuma or Solio, or with a paper that the photographer may prepare for himself.

Fig. 1 is intended for the face of a watch, but may be on two pieces of cardboard, celluloid, etc., according to the fancy or convenience of the photographer. The cut may be photographed to the desired size; a slow plate such as Carbutt's B, and a hydroquinone developer well restrained, giving the best kind of negative—clear glass lines on an opaque ground.

Two prints may be made, for the easier cutting out of the required two discs, or rather the outer ring and the central disc; and if the meter is to be on the watch face, the segment b, c, e, should be cut out.

The outer ring, the upper half of which contains the exposure numbers in seconds, and the lower the stop values, is to be pasted on the dial, the 40 being in line with the XII, and 8-22 in line with the VI; and the disc pasted on the inside of the glass, which must be loose enough to revolve easily in its basin.

To make the "test tube" take a piece of yellow post office paper or heavy manila wrapping paper, and cut out a piece $1\frac{1}{2}$ inch wide and 4 inches long, as shown at a b c d in Fig. 2. Just below the top—about $\frac{1}{2}$ inch—cut a rectangular hole e, which shall be $\frac{1}{8}$ inch wide by $\frac{3}{8}$ inch long. Then fold the paper on the dotted lines e f and g h, and gum the wings, so that you have a long, narrow, flat tube or envelope, as shown in Fig. 3. On each side of the opening e is then pasted a piece of white paper tinted with water color or India ink, as described further on. One of these

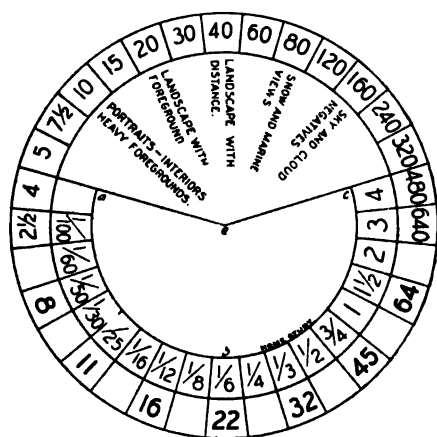


FIG. 1.

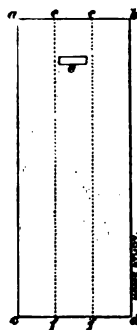


FIG. 2.

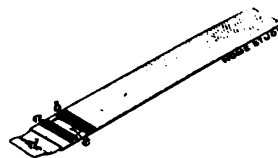


FIG. 3.

strips, b, is darker than the other, a, in order to establish a reliable comparison.

Now, before using the instrument, a piece of Solio, Albuma, Aristo, or any other printing paper is cut into strips $\frac{1}{2}$ inch wide, one of which is inserted in the envelope, as shown at d in Fig. 3. When the instrument is to be used, and it is desired to determine the proper exposure for a given subject, you take out your watch, and pull the printing paper out a trifle, so that a fresh spot comes under the opening e, and note the number of minutes or seconds required to turn the paper a shade darker than the tint at a, but not so dark as the tint b. The watch crystal is now revolved in the basil so that the figure on the experimental exposure scale, corresponding to the number of minutes or seconds the paper was exposed, is opposite the general title of subject of which the photograph is to be taken—then, on the opposite side, under each size of stop, will be found the correct exposure for that stop in minutes or seconds.

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"COSMOS."
BY
A. P. STOKES."

For instance, suppose we are photographing an open landscape, with no foreground within a hundred feet; we find, on consulting our photometer, that it required 40 seconds to turn the silver paper to a shade between a and b. We then set the 40 of the upper scale opposite the subject. Landscape with distance, and over 8, on the lower scale or stops, we find the exposure would be 1-50 of a second, or, with a small stop, we find under 64 the time required would be $1\frac{1}{2}$ seconds. This would be with the fastest plates, while the slower ones would require proportionately longer exposures, according to the table given below.

Now, to determine the proper tints for a and b it is necessary to work backwards, so to speak. Set up your camera on a dull or cloudy day and focus on a fence or some foliage not more than 25 feet distance; close your shutter, put in f-64 stop, and, after placing your plate-holder in the camera, withdraw the slide one inch, and expose for one second; close your shutter, put in $f/64$ stop, and, after placing your plate-holder another second. Repeat this operation five times, and carefully develop the plate. Select from the five one inch strips the one that is nearest to the ideal negative, and the time of its exposure will be the key to the situation.

Suppose the strip that had the two seconds exposure to be the best, turn the 64 of the stop values disc to the 2 on the exposure scale; and on that scale opposite "landscape with foreground," will be found 30 seconds as the time required to turn the paper the desired color. Expose a piece of the paper you are to use, for 30 seconds to the same light by which the strips were photographed, and then, in subdued light, make one tint a little lighter and one a little darker than the test paper.

As the fastest plates are most generally employed, the exposure meter should be "set" for them, and the necessary allowance made for those that are slower. Just what that allowance should be may be ascertained by experiment; but the following are, by the inventor of the meter, said to be the relative rapidities of a few.

1.	$1\frac{1}{2}$.	$2\frac{1}{4}$.	4	20
Cramer Crown. Hammer Fastest Seed 27.	Cramer Banner. Seed 26. Carbutt Eclipse.	Seed 23. Cramer Medium Isochromatic	Cramer Anchor. Hammer Slowest. Carbutt Ortho, 23	Carbutt, " B "

ANDREW PRINGLE, as a result of a trip to Sicily and Naples, says: "I shall never, in future, use an unbacked plate." A very good resolution.

Philadelphia Photographic Salon—1899.

The Pennsylvania Academy of the Fine Arts has the honor to announce that under joint management with the Photographic Society of Philadelphia, the Philadelphia Photographic Salon for 1899 (second year) will be held in the Galleries of the Academy, Broad street, above Arch, from October 22 to November 19, 1899.

The purpose of the salon is to exhibit that class of work only in which there is distinct evidence of individual artistic feeling and execution, the pictures to be rigidly selected by a competent jury.

Pictures which have already been shown in Philadelphia at any exhibition open to the general public will be liable to exclusion.

No awards are offered, and no charge will be made to exhibitors. Each exhibitor will be furnished with a catalogue, which will be the official notification of acceptance.

No exhibitor may submit more than ten pictures, each of which must be framed separately.

The title of each picture and the exhibitor's name and address must be clearly written on the labels provided, which must be attached by the exhibitor to the back of each picture. Nothing may appear on front of picture except the title and exhibitor's name.

No accepted pictures may be removed before the close of the exhibition.

Arrangements will be made for the sale of pictures if desired, subject to a commission of fifteen per cent.

All communications and all pictures submitted for exhibition must be addressed to the Pennsylvania Academy of the Fine Arts, Broad street, above Arch, Philadelphia, Pa., U. S. A. All pictures must be forwarded at owner's risk, carriage prepaid, and delivered at the academy not later than 5 P. M., Monday, October 2, 1899.

Return charges must be collected by carrier.

The management will use all reasonable care to prevent any loss or damage to pictures in its charge, but will not be responsible for such occurrence.

To Foreign Exhibitors.—Mr. A. Horsley Hinton, 1 Creed Lane, Ludgate Hill, E. C., London, has kindly consented to act as General Foreign Representative. Circulars, entry forms, labels, etc., also any special information desired will be furnished by him on application.

The following shipping agents have also been appointed: Mr. William Whiteley (Mr. Wiggins, manager shipping department), 115 Queen's

Road, Bayswater, W., London, England; and Messrs. Guinchard and Fourniret, 76 Rue Blanche, Paris, France.

Pictures delivered to either of the above shipping agents, not later than August 15, carriage prepaid, properly labelled, marked "For the Philadelphia Photographic Salon," and accompanied by entry forms, will be transported to the exhibition and returned to the shipping agents in London or Paris free of all expense to the exhibitor.

United States Custom House charges on all foreign exhibits sent through the above shipping agents will be borne by the management.

Jury of Selection: Mr. F. Holland Day, Boston; Mrs. Gertrude Kasebier, New York; Mr. Clarence H. White, Newark, O., Miss Frances B. Johnston, Washington, D. C.; Mr. Henry Troth, Philadelphia.

The Pennsylvania Academy of the Fine Arts: Edward H. Coates, president; Harrison S. Morris, secretary. The Photographic Society of Philadelphia, Robert S. Redfield, George Vaux, Jr., John G. Bullock.

Philadelphia, Pa., U. S. A., June 1, 1899.

The Contribution Box.

AN old negative has been recommended for trimming prints on, but it soon gets scratched, and knife marked. If those who are troubled with prints slipping while cutting will coat the glasses, both the cutting shape and the glass on which they cut, with ordinary paste, I always use Carter's, and let it dry thoroughly, they will never again be troubled.

R. G. MURRAY.

THE POOR MAN'S LENS.

I am glad you called my attention to the above lens, and am very much pleased with it, having found it all and much more than you claimed for it. But at first I was puzzled to know the exposures for the various single lenses, they being all different, and the iris ring could be marked only for one. I have got over it in an easy way, and as others may be puzzled in the same way, and may not think of the same way of getting over the difficulty, I give it.

The lenses are all marked with the focal length in centimetres, a cypher added to that makes it millimetres; and that number divided by the number of millimetres in the stop, is the f value. For example: the lens is marked 45, a cypher added to that makes it 450, the stop is 15 millimetres, and 450 divided by 15, makes the stop $f/30$. For pictorial purposes the largest stop is small enough for all the single lenses, and so I

have marked the scale for all four, and am never at a loss for the right exposure, as I always employ a Wynne's exposure meter.

G. H. WILSON.

REDUCING PRINTS.

From my desultory way of printing I often over-exposed the prints and had to throw them away, but now, if one or two are too dark, I put them through in the ordinary way. After fixing, I add to the fixing solution sufficient of a solution of potassium ferricyanide to make it a pale yellow, and put the too dark prints into this, one at a time, watching carefully, and in a few seconds the desired reduction is effected. It is better to overtone a little, as reduction makes them a shade redder.

G. H. SLIGHT.

[The prints are all excellent examples of photography, and we could not say which of the lot had been subjected to the reducing process.—Eds.]

A SUPPLEMENTARY LENS.

Although the use of a supplementary lens for lengthening or shortening the focus of a compound lens is not new, it is not so well known as it should be. Becoming a convert to your teaching as to the necessity of a lens of long focus in pictorial work; and, for pecuniary reasons, forced to be content with the one I was induced to buy along with the camera, 8 inches for a 5 x 7 plate, I resolved to see what could be done with a supplementary lens.

My camera has a bellows capacity of 16 inches, and I wished to lengthen the lens by about one half, or to between 12 and 14 inches. From an obliging optician I got a dozen untrimmed plano-concave and double concave "spectacle eyes," extended the camera to 13 inches, and tried them one by one till I found one that gave a distant image tolerably sharp, having made a cardboard ring that kept them close to the diaphragm. I am not optician enough to know the focus of the negative lens, but was surprised to find how very slight a concavity did the business, and was even more surprised when the spectacle dealer charged me only ten cents for it.

I had no difficulty in mounting the lens in a piece of stout cardboard, so that it fits snugly, and properly centered behind the stop. I suppose that the supplementary lens should be achromatic, at least I have seen it so said; but mine is not so, and the definition is certainly all that anyone can require who knows anything about pictorial work. Just think of it, an 8 inch lens, worth \$26, converted into one of 14 inches and worth \$48, at a cost of ten cents.

G. R. STRUTHERS.

SKIES.

Through the teaching of "Ours," I have learned to see the absurdity of white paper skies, and find the editor's method of printing them in, or toning them down, simplicity itself. But I always print in subdued light, and find that when skies are printed in sunlight they tone to a different shade. Moving the card up and down for a quarter of an hour or more is no joke, and so I bethought myself how I could make it move itself, and succeeded beyond my utmost expectations. I bought a clock movement for \$3—an old one can be got at the watchmaker's for half that sum—fitted a 4 in. disk of tin on the minute arbor, made a number of holes for a pin at various distances, and that was all. The printing frame with the landscape printed print, is laid face up on the table, the cardboard fastened to one end of a wire, the other end of which is fastened to the pin in the disk, adjusted so as to give just the desired movement. The clock is wound up, and up and down, up and down the cardboard goes as long as may be necessary. It's a great scheme, well worth trying by all who are, as I am, disgusted with "bald-headed" skies.

RICHARD VERNON.

DETAIL IN WHITE DRESSES.

I want to thank the editor, and at the same time give a hint to those who suffer as I did. I make a specialty of children, and never could get detail in the white dresses. Having little leisure, I use "bought" solutions, and do what I liked, nothing but chalky opaque whites would come. I had noticed again and again in "Our Portfolio" the advice under such circumstances, to employ "solutions weak in the reducer," and found that the "perfect cure."

Tolidol is at present my favorite, and I have never found anything that suited me so well. The usual claim made for a new developer is that it is as good as pyro, but I like toolidol very much better than ever I liked pyro. The following is the formula I now employ, and although it takes its time, the results are all that anyone can desire. I may say that I prefer a one solution developer and make my exposure to suit it, and never find a necessity for alteration or modification.

As a strong solution keeps better than one weak enough for use, and as it is easier to simply dilute than to use scales and weights every time one wants to develop, I make a stock solution of 1 to 7; that is, one drachm of the solution to seven drachms of water gives me just the developer I want. That it keeps well may be known from the fact that I am using to-day what I made up early in October, and it is as good as when

made, and not darker than would be the result of adding one drop of caramel to ten ounces of water. The following is the formula:

Tolidol.....	40 grains
Sodium sulphite.....	120 "
Sodium carbonate.....	180 "
Potassium bromide	10 "
Water	5 ounces

Instead of toolidol, pyro, metol, or ortol may be employed in the same way, but it seems to me that they do not keep so well.

G. R. EVANS.

PICTURE POST-CARDS.

By invitation I return to the picture post-card question; having as I think, found a sensitizing solution as simple as the blue, but giving a very different color. It is:

Silver nitrate.....	12 grains
Uranium nitrate.....	120 "
Water	1 ounce

A few drops are poured on the card, spread with a glass rod, and dried, of course, in the dark. Printing is rather deep, and all the fixing necessary is washing in several changes of water slightly acidulated with nitric acid. The color is a good warm brown, and, if desired, may be changed to purple by gold, or a reddish by a weak solution of potassium ferricyanide.

A. W. LEIGHTON.

Mounting Prints.

A print that is also a picture is not finished when it is properly trimmed. It has to be mounted, and much, very much, either for good or ill, may be done to it by the mount. The size, the shape, and the color, each has its influence; and each deserves the most careful consideration.

We have been led to speak of this by the arrival from the A. M. Collins Manufacturing Co., of samples of their "Capito" and "Zarno" mounts, which, we need hardly say, so far as quality is concerned, are simply perfect. This has made us look up the samples that have come to us from time to time, and we can only say that the amateur that has such a supply can never be at a loss for a mount for any sort of picture that he may produce. Here are mounts of all needful sizes, all approved shapes and all desirable shades, from white to dark sage. Some are plain, some enameled on the front, some on both front and back, and some plain; while all, or rather each, is just the thing that will best suit some particular picture. The amateur who wants to find a suitable mount for any particular picture, with the least trouble, should lay on a complete stock of the A. M. Collins mounts, and so be able to always show his prints to the best advantage.

Notes.

CALICO PRINTING.—Mr. Andrew F. Hargreaves, of the Edinburgh Photographic Society, has invented a method of printing on textile fabrics that is at once extremely beautiful, perfectly simple, unaffected by light, and unaltered by boiling in soap, or similar solution. So far as we can understand, it is something akin to ordinary calico printing. The cellure tissue is filled with something that by the action of light becomes a mordant, and when brought into contact with, or boiled in another solution, generally spoken of as the "dye," an insoluble pigment is formed, and confined wherever the mordant is; and in proportion to the density of that mordant, which in its turn is dependent on the intensity or quantity of the light which formed it. We shall have more to say about it when the specification is published.

LANTERN SLIDES—We have often said that there is nothing in the whole range of photography more beautiful than a really fine lantern slide; and we may add that they are as rare as they are beautiful. Their makers may be counted on the fingers of one hand in most countries, and of Englishmen, Mr. Dockree seems to be one. At a recent meeting of the London Camera Club, where he exhibited some fine examples of his work, the discussion that followed the exhibition brought out one of the elements of his success—patient perseverance. In reply to a question, he said "The average time devoted to making a satisfactory slide was between four and five hours."

THE G. CRAMER DRY PLATE CO. requests us to inform the trade and photographers generally, that the extensive additions and improvements which have been going on at the factory for over a year are now practically completed; and that they are now in a position to fill all orders promptly on receipt, with plates of unsurpassed quality.

GOOD ADVICE TO PHOTOGRAPHERS.—Pirie Macdonald, the well known Albany photographer, in a recent address gave utterance to some words of wisdom that should be taken to heart by every photographer. He said they should not be mere makers of maps of faces, showing the location of a nose or mouth in relation to a pair of eyes. Should not be content to picture an empty shell; but rather aim at showing the strength and power, and the justice and truth; the manliness of a man, and the grace and purity and sweetness—the womanliness of a woman.

SIMULTANEOUS DEVELOPING AND FIXING is still being prosecuted, and doubtless has some real advantages. The latest formula that we have tried, and which gives excellent results, is one recommended by P. Hanneke, in the *Photographische Mittheilungen*. It is:

A.

Pyrocatechin	7 parts.
Caustic potass.....	7 "
Sodium hyposulphite	30 "
Water	75 "

B.

Sodium hyposulphite.....	20 parts.
Water	100 "

To make a developing and fixing solution, take eight parts of A, fifteen parts of B, and twenty parts of water. One quantity may be employed to develop and fix several negatives.

OZOTYPE. — This novel method of carbon printing is "catching on," and becoming a subject of demonstration at society meetings. Mr. Harry Wade showed its certainty, simplicity and beauty at a recent meeting of the Manchester Photographic Society, and gave the following formula as being that with which he had been most successful:

SENSITIZING SOLUTION.

Manganese sulphate	5 drms.
Potassium bichromate.....	3 drms.
Water	10 oz.

ACID BATH.

Acid acetic glacial.....	20 min.
Hydroquinone.....	10 gr.
Water	20 oz.

and recommended the beginner to use the ordinary single transfer paper, either rough or smooth, to be got from any of the dealers in carbon tissue.

MOUNTING AND FRAMING.—Judging the tree by its fruit, there is no part of picture making by photography in which the amateur is more at sea than in the mounting and framing; and, according to Mr. J. Horace McFarland's paper, read before the Photographic Society of Philadelphia, there is no part of his work of which it is more necessary that he should fully understand the vital principle underlying it, or by which it is governed; and that vital principle he has most happily placed in a nutshell. It is simply this: "Between the picture and its mount and frame there must be either color harmony or well balanced color contrast."

International Photographic Exhibition.

The Photographic Exposition that is to be held at Madison Square Garden next fall will, from present indications, be one of the most instructive and popular exhibitions ever held in this city. Arrangements have been concluded between Manager Frank W. Sanger, of Madison Square Garden, and the National Photographic Exposition Co., whereby the latter have leased the Garden for the week of October 21, to October 28. The exhibition will include everything of interest in the photographic line, the manufacture of cameras from start to finish, the making of sensitized papers, and other interesting matters. Many prominent foreign manufacturers have already expressed their intention of being well represented.

In a letter just received from Prof. W. Jerome Harrison, of Birmingham, England, he writes: "There is no possible doubt but that the exhibition will be an enormous success. Photography at the present day is the king of hobbies and is used in every art and science. A large and exceedingly valuable historical exhibit will be sent from this country and it will, I feel sure, be viewed with considerable interest by our American brethren across the sea. A comprehensive exhibit of old processes, old pictures, stereoscopic daguerreotypes, a magnificent series of calotypes and, in fact, some of the earlier work of Daguerre, Fox Talbot, Scott-Archer and others of the pioneers of photography will go forward to you in time for the exhibition."

A very fine loan collection of exhibits from the leading photographers of this country will be displayed in the large Concert Hall and the observatories, universities and institutions of learning will contribute interesting examples of the application of photography to the various sciences.

Words from the Watch Tower.

BY WATCHMAN.

EITHER Herr Schultz has a curious idea of the power of a patent, or he does not read the photographic journals, or somebody has blundered in translating the patent No. 623,491, in the last number of this magazine. This is what he thinks he can prevent anyone from doing without his leave; to be granted, probably, on a payment. The developed and rinsed negative is placed in a solution of potassium bromide, a piece

of bromide paper is then pressed against it and printed before the negative is fixed. A certain class of people and their money are soon parted.

* * *

The editor of the *Journal* of the Amateur Photographic Society of Madras, seems to have a queer idea of picture making by photography. He says "the art of photography is with the camera, and in the dark room; the rest is mainly mechanical, and depends more on the paper than the printer." Surely there is room for missionary work in Madras.

* * *

According to *The Photographic Times*, there are 1,500,000 hand cameras in the United States alone. What a blessing for the plate makers!

* * *

Many men, many minds! Different people look at art from different points of view. The tailors of London, as represented by the *Tailor and Cutter*, are down on the artists whose pictures are now in the Royal Academy, because of their inattention to the sartorial art. Impossible as it may seem, the tailors assert that the painters know no better than to paint Lord Kelvin's coat with only one button-hole, another with a sleeve too long, a third with a button large enough for a greatcoat, and worse still, if worse could be, a pair of trousers with a seam not exactly where a seam should be. Can it be possible that our artists are so ignorant? and if so, is it not time that the Royal Academy, or some other institution of equal power, should make the R. A.'s, and all those who hope, some day to reach that desirable elevation, submit to a sartorial examination before they are allowed to start as portrait painters. Just think of the terrible calamity of being handed down to posterity with one of the seams of your trousers not just as, in the opinion of a tailor, it ought to be.

* * *

What can have happened to the usually good natured *Practical Photographer*? I do not remember ever having to find fault with it before, and would not do so now, had it been more specific and less general. Here is what it tells its readers about American photographic journals: "The American photographic journals get steadily worse. Some of them are entirely made up of cuttings from English publications, others rather less so, but in nearly all there is a marked absence of original contributions, all the more remarkable when the Yankees are so brilliant in popular journalism." That may be true of *some* of the American journals,

but it is not so of all, and if it were, is it not rather a compliment paid to the English journals? But if it be true that there is a reason for all things, there must be a reason for the complaint of the *Practical*, and I think I have found it. A somewhat careful look over the pages of the scissors using offenders shows that even they hardly, if ever, think they find in the *Practical* anything worth reproducing.

* * *

If all were like the genial editor of *Wilson's* my occupation of watching for slips would be a sinecure, a job that I should enjoy immensely, if the pay continued. But it doesn't, and so I am glad to find that he, like the rest of us, is mortal. The slip was a small one, but slips, however small, make history; and so I cannot conscientiously let it pass. This is what he says, "The advent of dry plates made the amateur possible." Who made the dry plate possible? Long before a dry plate was thought of, it may be said of the amateur "There were giants in those days." The amateur, like the poor, has been with us always; and will be to the end of the chapter, or it will be a sad day for photography.

* * *

This same regard for the history of the future induces me to again notice the vagaries of the teacher in a college of photography. In the same issue of *Wilson's* he is allowed to tell the readers that the reason why, when oxalic acid is employed as a preservative of pyro, it should be added first, is that it deposits the organic matter and kills the germs in the water; whereas, if the pyro was put in first, it would feed on those germs. Perhaps by so feeding it might get so fat as to be lazy and unfit for its work. Again, he tells them that the mission of the alkali is to open up the little sacks of gelatine into which the silver bromide is packed, and so let the pyro do its work. Is it quite fair to let such teachings pass without a word of warning?

Colored Transparencies.

BY PROF. R. NAMIAS.

In the *Bulletin* of the Photographic Society of Italy, Professor Namias shows how, by taking advantage of the fact that bichromate gelatine on exposure to light loses the property of absorbing saline solutions, transparencies in different colors may be produced.

If a bichromated gelatine plate be printed under a dispositive, an ordinary transparency, washed till every trace of bichromate has been re-

moved and examined by reflected light, an image in more or less pronounced relief will be seen highest in the deepest shadows but in correct gradation down to none at all in the highest lights, if the exposure has been sufficient. If this be immersed, first in one and then in another of two saline solutions, the reaction on each other, or the double decomposition of which results in a colored and insoluble compound, they will be absorbed in succession and in proportion to the degree of swelling, giving a picture in the color of the precipitate and with all the delicate gradation of the transparency.

According to Prof. Namias, transparencies of any color may be obtained from old and fogged plates if the latter are first fixed in hypo, then thoroughly washed, and afterward immersed in a four per cent. solution of bichromate of potash, and dried. The bichromate plate should be exposed to light under a positive (which may be even a silver print rendered transparent with vaseline). An exposure of about two minutes in strong light will suffice, if the positive be perfectly transparent, to obtain the insolubilization of the gelatine in correct proportion. After printing, the bichromated plate should be washed for a long time in running water, so as to remove all trace of color from the gelatine even when it underwent the maximum light action. At this stage, if the plate be observed carefully the image will be seen in relief, because the parts not touched by light absorb water and swell, while the better illuminated portions swell less or not at all.

The plate is now immersed in the first saline solution, which should never be stronger than five or ten per cent., as otherwise it would penetrate the gelatine with difficulty. In this the plate rests for about a quarter of an hour, after which it removed, simply drained, and introduced into the second solution, destined to react on the first and give the colored precipitate. Even this solution should be rather diluted. After a few minutes the plate is removed from the second bath and is washed well, the surface, if necessary, being rubbed to remove any precipitate therein formed. The colors are numerous because the number of colored precipitates that we may obtain by chemical reaction is great. The following will show a few that may be advantageously employed:

First solution.	Second solution.	Color of the precipitate.
Barium chloride.	Sodium sulphate.	White.
Uranium nitrate.	Potassium ferrocyanide.	Dark red.
Cupric sulphate.	Potassium ferrocyanide.	Light red.
Ferric chloride.	Potassium ferrocyanide.	Blue.
Cadmium chloride	Sodium sulphide.	Yellow.
Lead acetate.	Sodium sulphide.	Black.

The "Pepper Process."

A METHOD OF MAKING "BURNT IN" ENAMELS.

AT a recent meeting of the Leeds Camera Club, Mr. Elliff gave a description and demonstration of a method of producing lantern slides, or pictures on porcelain, and afterwards burning them in, that seems extremely simple, and as they are, or become, a part of the glass or porcelain itself, they are as permanent as the stained glass that has lasted for hundreds of years.

The process is founded on the fact that oil of pepper is so affected by the action of light as to convert the tackiness of a thin film to a state that is not tacky, or to a state in which powder dusted on, or brushed on, will not adhere. In other words, the "pepper process" is our old friend, the "dusting on," only a very much simpler method.

Instead of using the oil, its solution in benzole is employed, prepared as follows. We give the *modus operandi* pretty much in Mr. Elliff's own words.

Benzole	8 ozs.
Pure white pepper.....	5 ozs.

Put these into a 16 oz. bottle, and allow same to digest for about a week; give repeated shakings, and the result will be the benzole will have extracted the oil from the pepper; this is now thoroughly filtered, when we shall probably find we have about 4 oz. of solution; to each ounce add 10 drops of the best hard oak varnish and 4 drops of castor oil, shake, and again thoroughly filter. We shall have now a fairly good sensitive solution. One of the peculiarities of the pepper oil is that it works better in company than it does by itself; besides, the oil of pepper is too smudgy by itself; that is, when the color is dusted over it the heavy shadows become clogged up; by adding the varnish and castor oil we give the solution a body and get the proper consistency for correct development.

In the course of my experiments with the above I have not found it to take any longer in printing with the additional oil added, but, on the contrary, a little less time is required. I do not regard this as being more sensitive, but I should say that it is on account of the solution being of a harder consistency. I have experimented with a great number of different varnishes, but the hard oak has always given the best results; it gives a more plucky image in development.

In giving the details for the making of a lantern slide, the procedure will be the same as in the making of a print or a china plaque. In a subdued light, take a piece of glass, thoroughly clean it, let it be entirely free

from lint, dust, etc., and coat it with a solution in the same manner as ordinary collodion, by pouring a pool of solution into the center of glass and allowing to flow to corners, then pour the surplus back again into the bottle, and in a few moments the solution will set; allow say five minutes to partially dry, when it is ready to be placed in contact with a transparency for printing. A transparency is used in this case instead of a negative, as the action of light has the effect of hardening the film so that it cannot take up color, the darkest portions of the transparency not allowing much light to pass; the film, in consequence, takes color very freely, and the half-tones in proportion to the density of transparency. It will thus be seen that if we want to vignette, it will be necessary to vignette the transparency, as it will not be possible to vignette in any other way. It is necessary that the transparency should be perfect in every way, and should be perfectly free from stain; a good blue-black transparency I find is most suitable; personally I use a process-plate developed with metol; this gives a good workable transparency, and is easily made.

With regard to exposure I do not think anyone can go wrong; it is rather slow, which has its advantages. Give about four hours' exposure to a good light, not sunlight; you cannot very well over-expose, as I have found when developing that if the prints have been much over-exposed the results on development have been exactly as if they had received correct exposure.

For slide-making we are rather restricted as to colors, as it is necessary that whatever color we develop with should, when fired, show the same color through the glass as it does on the surface. Handcocks, of Worcester, supply a good glass black which is very suitable for this purpose, and which they put up in 6d. tubes. It gives a very pleasing tone when fired, and has great covering power. In developing our slide, which we will presume is now ready, dust a little of the powder over the film with a camel-hair mop, working it in a circular direction, when the color will begin to hold on to what should be the darkest part of the picture. Continue to develop until the film will not absorb any more color, when we shall probably find the slide is far from being fully developed. In that case warm the slide gently before the fire, when it will again absorb color; continue this until the slide is properly developed. Over-exposure requires a greater heat to develop. Under-exposure requires a very little heat or none at all, and gives no depth to the shadows, so that it is best to err on the side of over-exposure, as by using more heat in development the results are practically the same as correct exposure. In every case develop further than you wish the finished results to be, as the color be-

comes more transparent in firing, on account of the flux which the color contains. When development is completed, take a wad of cotton-wool and rub gently over the picture to remove all surplus color, when, as far as the picture is concerned, it is ready for firing. But if it is necessary to mask the slide, it can be done in the following manner:

Take a portion of the powder color and mix it with a little japan gold size to a stiff paste, then thin it down for easy working with turpentine, then with a long camel-hair pencil proceed to paint or block out all the portion not required. The color, when put on, must be thoroughly opaque, and when dry is ready for firing in a muffle furnace.

Fletchers, of Warrington, supply a gas furnace that is very suitable for this class of work. The interior of the muffle should not be less than, say, 6 in. by 4 in., and should be fitted with a shelf of iron or, preferably, nickel, which should be dusted thickly with plaster of paris and flattened out to form a bed by a piece of glass. The slide is then placed upon this and put inside the furnace and fired. The heat should be raised very gently until the color, which before was perfectly dull, is now fully glazed; not less than thirty minutes should be taken to accomplish this, as by turning the gas on gently and taking plenty of time the color fires more to its truer tint, and, also there is less danger of uneven firing. When sufficiently fixed it should be allowed to cool slowly, or there will be danger of cracking. Spotting the slides can also be done in the same manner as masking, by using a little white enamel. Where many of these slides are stored they have a great advantage over other slides, for, as they require no cover-glasses, they consequently take up but half the room, and if the edges of the glass are, either before or afterwards, ground and polished, they have quite a finished appearance.

No doubt it will appear plain that slides by this process cannot be produced quite as quickly as those by the ordinary processes, but the little extra work they entail, considering the advantages they offer, should quite compensate us for their production, and, if successfully made, we can rest assured that we have produced a lantern slide that can be washed and cleansed as freely as a dinner-plate, and will also resist decay equal to the ware of the potter.

The Influence of the Hand Camera.

According to the *Photographic Times*, there are in this country alone 1,500,000 hand cameras, and presumably, as many amateur photographers; a mighty power for good or evil. The good is mainly con-

fined to the plate makers, the evil is evidently to the photographer himself. Seeing nothing but the white and black—the result of under exposure—he has lost the power of appreciation, and does not realize the wretchedness of the stuff turned out by at least 90 per cent. of all who carry a hand camera, and that simply because they will not learn its limitations.

Printing on Plain Paper.

BY JAMES ROSS.

NOW that the highly glossy print has been by almost one consent voted vulgar, and the greed of the paper makers has succeeded in artificially raising the price of the Aristo family, there should be a chance for the old home made sensitive paper that has been for too long neglected.

Something like this occurred to me a month or two ago, while amusing myself looking over a portfolio of prints, some of them dated as far back as 1860; mostly on plain paper, and sensitized, some on neutral, some on acid, and some on ammonio-nitrate of silver; and toned, some in hypo and gold, some in the early iron or iodine combined baths, which was really sulphide toning, and some in alkaline gold. Many, perhaps most of them, are sadly faded or discolored, but some retain the fine purple, and even black, apparently unchanged otherwise than by the yellowing of the paper, and compare very favorably with most of the modern printers' work.

This, I say, set me a thinking, and thinking led to resolution; the result being that after a search through all available formula, I fixed on that recommended by W. J. Brooke in a recent number of *Photography*, and not only found it all that I expected, but with it can make prints at less than half the cost of the cheapest paper in the market; and, with the exception of platinum and carbon, better than I have ever made on any other paper.

The only difficulty is to get the raw material—a suitable paper—without encouraging the paper trust. The best that I have yet found, and it is not perfect, is water-marked "Victoria Bond," and the heaviest of it that I have been able to get is twenty pounds the 17 x 22 ream. One of its faults is the watermark, generally about the middle of the sheet, but it is cheap enough to make that of secondary importance.

With a view to keep the print as much as possible on the surface, it is well to give the paper a sizing with arrowroot, and when that is dry the

sheets may be "salted" by floating for three or four minutes on the following solution :

Ammonium chloride.....	60 grains
Sodium citrate, neutral.....	100 "
Gelatine.....	120 "
Water.....	10 ounces.

Soak the gelatine in the water for an hour or two, dissolve by gentle heat, add the other ingredients and filter. The solution should be used before it is quite cold. Any quantity of paper may be salted at one time, as it will keep indefinitely.

The sensitizing solution is as follows :

Silver nitrate.....	1 ounce
Acid citric.....	$\frac{1}{2}$ "
Water (distilled).....	8 "

Dissolve the salts separately, each in four ounces of the water, and mix the solutions. The solution may be applied with a Buckle's brush—a tuft of cotton partly drawn into the end of a glass tube—or by floating, if the operator cares to make up a sufficient quantity. The operations should be performed in the dark room, and the paper clipped up to dry.

This paper prints rapidly, and by simple fixing in a ten per cent. solution of hypo, gives tones that are admired by many. Or it may be toned by any of the alkaline gold formulæ, through all the various shades of warm browns to dark purples, depending, as in all other silver methods, to a large extent on the quality of the negative.

Personally, I prefer to tone with platinum, and the following will be found satisfactory :

Potassium chloroplatinite.....	5 grains
Salt.....	50 "
Citric acid.....	50 "
Water (distilled).....	30 ounces

This bath will keep indefinitely, and only needs half a grain of platinum salt per dozen 5 x 7 prints to keep it well replenished.

The colors obtainable by using platinum toning vary from red to black through all the intermediate stages, according to the time of immersion. Thus one minute's immersion will give a red, two minutes a red-brown, and so on. For a black, ten minutes may be needed. But if toning is stopped in the earlier stages, sufficient solution will be carried on the print into the washing water to continue the toning operation, and a darker tint will be obtained than is desired ; to prevent this remove from the toning bath to one composed of :

Sodium carbonate.....	$\frac{1}{4}$ ounce
Water.....	40 "

then fix, without washing, in :

Hypo.....	4 ounces
Sodium sulphite.....	2 "
Water.....	40 "
Ammonia .880).....	1 drachm.

This bath may be used with advantage in gold toning as well as platinum.

Our Portfolio.

[Prints sent for criticism—*not more than one at a time*—should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.* (during July and August to *Point o' Woods, N. Y.*), and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in THE AMERICAN AMATEUR PHOTOGRAPHER.]

448. HARRY STARK.—"When the Shadows Are Long" is a well selected subject from an excellent point of view, and by its cast shadows and general appearance suggesting the afternoon quiet. Its only fault, and without which it would have been a very fine picture, is the same as your 442, false values. What was said of it on that score is equally applicable to this. We may also reproduce it.

449. VERE GOOLDE.—"Montreal on the Mountain" is an interesting photograph of the "record of fact" variety, but has no claim to be a picture. A slightly longer exposure would have given better values; as the houses are not so white as here represented.

450. C. G. MOORE, in "Who Would Not Be Aged and Infirm, to Be Consoled Like This?" aims high, and comes very near to success. A grandfather, presumably; a three inch head; clasped round the neck by a pretty granddaughter, a fine conception, skillfully carried out both as regards lighting and composition, and a striking proof that detail, and plenty of it, is not inimical to true pictorial effect; and at the same time an excellent example of the advantage of its absence where it is not necessary. The fault, indeed the only real fault, is the unsuitable expression of the child. She should have had her attention directed to her grandfather, looking at and fondling him, instead of, as she is, apparently watching the photographer. We shall reproduce it.

451. C. C. AUGÉ.—"Curiosity and Confidence," a dog watching a kitten, is a photograph of very good technique, with about twice the proper amount of foreground, and so absurdly trimmed that the horizontal lines of the wall that serves as background are at an angle of over six degrees. This is all the more inexcusable, as the lines themselves are such an excellent guide to trimming.

452. M. J. MELLON.—A girl beside a basket of apples, staring at the camera, is a meaningless subject, and a very poor photograph; a waste of good material. A picture should convey some idea and the exposure should be such as to give something else than white and black.

453. J. M. CONNER.—"A Little Waterfall" is a much under exposed photograph of a subject, from this point at least, not worth photographing. The exposure has been so short that everything is black that is not white, and the fall and its surroundings are without a trace of the picturesque. Exposure on such a subject is a waste of a plate.

454. MRS. HARRY HANAFORD.—"Our Libbie." Portraiture, to be even tolerable

needs much more thinking out than this has got. It has not one good feature, except, perhaps, the lighting, and it has got too little of that, white paper being made to represent skin texture, a serious fault in any portrait, but especially so in one in which so much skin is shown. The pose is awkward, the left arm constrained. The expression with so much of the white of the eyes seen, is meaningless; the curtain background is distracting and ungraceful, and there is no suggestion of distance between it and the head, and to crown all the detail in the dress is as pronounced as if a dressmaker's pattern had been the object in view rather than a portrait. Successful portraiture is the highest phase of photography, but a successful portrait is something more than a mere likeness. Make up your mind what that something is to be, and strain every nerve to reach it. A plain background is much easier managed than any other. Keep the detail of the dress down; a mere suggestion is enough, and expose long enough to secure complete development without pushing; till the face, arms and neck are opaque. As a rule, it is a mistake to let your models wear low necked dresses, or if they do, cover them up by a graceful draping. The tone or color is simply a matter of taste. Personally, we prefer, for portraiture, warm browns or reds.

455. J. F. WILLIAMS.—"Moonbeams on the Water," although a rather hackneyed subject, is one of the best representations that we have seen for a long time. The ripple on the water, the quay on the right leading the eye to it, and breaking up the otherwise plain foreground, the distant town with the smoke from two tall chimneys, so suggestive of the evening breeze, and the silver lined cloudland with its more silvery moon, all combine to make a fine picture, which we shall have pleasure in reproducing. See Frontispiece.

456. J. EDGAR ALLEN.—"They Toil Not, Neither Do They Spin." This is in every sense a beautiful picture, with just one serious fault. It should have been an upright, and so got rid of the utterly useless and distracting matter on the left behind the figure. We shall reproduce it, so that our readers may, by covering the objectionable part, see how great is the improvement. This will be an excellent object lesson on the beauty of simplicity, and an illustration of the oft stated fact that whatever in a picture does not help, hinders. See page 279.

457. W. E. COGSWELL.—"Portrait." We hardly know what to say about this. It is either a very good likeness spoiled by a very good photograph of the very ornate back of a rattan chair, or *vice versa*. Each is good of its kind, but the combination is a huge blunder that keeps the eye wandering hither and thither like Noah's dove, finding rest on neither. Without the distracting chair back the figure would be a really good sample of the average professional likeness, but one that can do so well, and being at liberty to do as he likes, should do much better. You should aim at portraiture, which includes far more than mere likenesses; includes a revelation of the inner as well as the outer man—or woman; and as a rule, subduing everything that does not directly contribute to that revelation.

458. G. R. BOSWORTH.—"Springtime." There is no suggestion of spring or of any other season in this. It is a photograph of the record order, evidently made without any particular aim, and printed from a negative much too weak. It looks exactly as if, on removal from the printing frame, it had been exposed to sunlight till partially darkened all over. Good subjects may, no doubt, be found along the banks of the creek, but they should not include the ugly bridge, and must be lighted and photographed so as to give the necessary contrast. There is not one bit of light in the whole 5 x 7 print. Intensification would be a slight improvement.

459. C. A. W.—“The Glory of the Morning” is disappointing, but not more so than are all, or almost all, such attempts. But, while failing in your aim, you have succeeded in making a very good photograph of the record of fact variety. “Impressionistic—in the true sense of the word—is the highest phase of photography, but you went the wrong way about it in stopping down to secure definition.” “Suggestion, not depiction,” should be your motto, and for that purpose $f/16$ will be found better than any smaller aperture. Local treatment of the negative, both during and after development, and of the print, both during and after printing, on both of which we have articles in preparation, will be found helpful.

460. PRIMUS.—“Trees” is an example of really fine photography, but nothing more. Five trees all in a row have no pictorial quality. Such good work should not be so thrown away. You should study some work on picture making, and when you have “learned to see,” you will turn it to better account.

461. G. F. GOURLEY.—“The Old Mill Race” is a good subject not well photographed. A longer exposure would have given better values, but it is too late in the day to tolerate a sky of white paper, the path by the stream almost as white, and the greater part of the water simply black. These are faults of photography: a fault of composition is the tree on the left too close to, and repeating the marginal line of the print.

462. H. C. RISING.—“Irene” is not a success. The head is too far to the side to seem natural, and the effect is stiff and mechanical; while the expression is meaningless. Success in this class of work comes only with much study and well trained models.

463. D. J. DOWDNEY.—“Park Lawn” is a well selected subject of its kind, belonging to the record rather than the pictorial phase of photography. As a photograph it is very much under exposed, everything being black that is not white. Black grass, black trees and a perfectly white sky do not in any degree represent nature.

464. J. H. SCOTT.—“Springtime” is good in selection and composition, but not quite true in values. A longer exposure would have been an improvement. An inch and a quarter trimmed from the foreground, and as much from the sky is also a very decided improvement, even although it does leave the print too nearly square.

465. E. W. PASCOE.—“The Touch of Time” is far from satisfactory. The series of nearly parallel horizontal lights extending from the foreground to the middle distance is a serious offence to art, and the uniform gray, without a shade of dark or half dark, is equally objectional. Such lack of contrast is fatal to the photograph.

466. C. G. MOORE.—Although, as a rule, we do not notice more than one picture from any correspondent in any one number, we make an exception of this, which may be said to be almost a replica of that noticed as 451, the only difference being the carrying out of the suggestion we made regarding the action of the child. It is now in every respect a fine picture which we shall gladly reproduce.

467. F. A. CLARK.—“My Lady Fair” is far from satisfactory, either in pose or lighting. The former is stiff, the equal angle of the arms bad, and the expression meaningless. The latter from too much in front, preventing the formation of shadow, and making everything flat. Such a pose and such a head dress should be left to the professional who must please his sitters. The amateur who can choose both should see that they have greater art possibilities than these. Lighting and development must be such as to represent, say the skirt, in some other way than by an expanse of white paper.

468. C. E. TETZMEIER.—“The Old Mill” is a fine subject from a good point of

view, and but for one fatal fault, would have been a fine picture. A too short exposure has resulted in utterly false values, everything on which light has not fallen direct being simply black.

469. D. N. VAN HOESEN.—"Fall Creek," as represented here, has no pictorial merit, no *motif* or objective point, and conveys no particular impression. It is quite faulty as a "record of fact," being so much under exposed as to be simply white and black. An exposure of three times as long would have been necessary to give anything like true values.

470. W. J. HELWIG.—"Children at the Well" is a good photograph, that would have been better of a longer exposure. It would have been better also as an upright, and so got rid of some of the useless matter to right and left; and the children should have been looking at each other instead of both looking at the camera. This was a fatal mistake.

471. C. H. WILKINS.—"The Tryst" is a fine composition in which everything is just as it should be, except values; but they are utterly false. The bridge, the top of the fence, and the water are simply white paper, while the trees on the left are simply black. With sufficient exposure this would have been a very charming picture.

472. F. A. D.—"The Cot in the Wood." There is nothing here as it should be. It is not a "Cot," but a two-story building with basement; it is pushed far too near the left; and the impression of a "wood" is not at all suggested. It is rather a steep, rocky, sapling-covered bank. As a photograph it is so much under exposed or under developed, or probably both, as to be worthless; little more for the most part than blackened paper. Try intensifying the negative, print much lighter, and trim two and three-quarter inches from the right, close by the root of the second tree from the house, and you may make a fairly passable picture.

473. HELEN L. GRISWOLD.—"Close of Day" is a beautiful pastoral scene, in which by cattle at rest in the foreground, the fading light behind trees in the middle distance, and lower tone of the cloudy sky toward the zenith, all join together in proclaiming the fact that the close of day has come. It is a fine picture with excellent values; and makes us wish that our fair correspondent would either take to a much larger camera, or enlarge from her small negatives. We shall have pleasure in reproducing "Close of Day."

474. H. A. FISHER.—"Rumford Falls" is so under exposed as to be simply worthless. A lot of white paper does not represent water.

475. R. B. LAMSON.—"A Pioneer" is a well selected subject with a fine cloud-land, but spoiled by utterly false values. It is difficult to understand how one who can photograph so well should be satisfied with, and even send for criticism, a print in which the tree, the objective point of the picture, the fence, and indeed everything on which direct light has not fallen, is simply black paper. Even the sky, where seen through white clouds, is very much darker than ever was a daylight sky; and the road is as white as if covered with snow. An exposure two or three times as long was necessary to get anything like true values.

476. H. PFUND, JR.—"Mendota Shore" is a very poor photograph of a very well selected subject. Water and sky are simply white paper, and the foliage is nothing but dark. A very much longer exposure was required.

477. F. R. ARCHIBALD.—"The Storm" is of interest only for its sky, but that is very good, so good that one can *feel* that the storm is about to break, and the effect would have been still better if not quite so deeply printed.

478. C. B. S.—“Gate in the Woods” is, from under exposure, simply a waste of material. The removal of the two prostrate trees, one horizontal, the other at an angle, and which we suppose suggested the “gate” notion, would make it a fairly good subject; but the very much too short exposure has resulted in nothing but white and black, where neither white nor black should be.

479. W. J. McBRIDE.—“In Lincoln Park.” In spite of our oft-repeated recommendation to mount on cards only a trifle larger than the print, you send an $8\frac{1}{2} \times 6\frac{1}{2}$ with two-inch margin, the result being that Uncle Sam's messengers have smashed it. We can see however that it is a fairly good selection, utterly false in values. Beautiful white clouds on a nearly black sky; water represented by white paper, and trees simply black silhouettes. The exposure has been far too short. It is possible that the unnaturally dark sky may have been a result of the employment of a too dark color filter, but the blackness of everything in the landscape on which light has not fallen direct is due to under exposure.

480. CARL C. DISTLER.—“Here Comes Papa” is both refreshing and encouraging, because it approaches more nearly true tonality or values than 90 per cent. of all the prints that come to “Our Portfolio.” A child—nearly a two-inch head—has climbed up on a chair and is leaning on its back, probably to look out of a window; and the delighted expression, in which both eyes and mouth have a part, shows unmistakably that it has recognized the object of its search. But while pose and expression are both good and natural, the folds of the cape, like wings on each side of the face, are objectionable features that should have been removed, while a less pronounced and less assertive chair might easily have been found. Except for those faults it is a very good bit of work that we shall have pleasure in reproducing.

Our Table.

THE HALLER-KEMPER CO.'S SPECIALTIES.—If the amateur does not succeed, it is not because he is not well catered for. Foremost among those who do much to make things easy for him is the Haller-Kemper Co., of Chicago, from whom we have just received several additions to the *materia photographica*, every one of which will be welcome to all who will give them a trial.

SENSITOL is a sensitizing solution that every photographer should have in a handy corner, as it is always ready for use; and with a camel hair brush, can be applied to any possible surface on which a picture can be desired. Note-paper, post-cards, silk, and every kind of textile fabric may have a picture on all or on any part of it, made with the least possible trouble, and the highest degree of satisfaction. Before beginning to write this notice we tore a few square inches from the tail of an old shirt, poured a few drops of the Sensitol into a saucer, and with a camel hair brush spread it over the cloth, and clipped it up to dry. A few minutes in sunshine gave a vigorous print, and a wash, first in water acidulated with hydrochloric acid, to improve the whites, and then in three or four changes of plain water, a wring out, and we had a print that no one need be ashamed of. The color is a warm purple brown, but may be toned to any desired shade in gold, platinum, Tonfixal, etc.

“KRUZO” is a new developing paper, for which the Haller-Kemper Co. are agents. It is made by the Kilborn Paper Co., of Cedar Rapids, and in two grades, glossy and

matte. We have employed it in printing from negatives of various qualities, and from the simplicity of its manipulation, and the beauty of the results, we have no hesitation in saying that it needs only to be known to become a very general favorite.

"TONFIXOL" is in the form of a cartridge, the 25 cent size of which makes six ounces of a combined bath, that gives to all kinds of silver prints a tone depending on the strength of the negative, and the depth of printing. As our readers know, for some time we fought the battle of the combined bath almost single handed, but now we have got on our side Bothamely, Burton, Henderson and others, all men whose words have weight; and so we are in good company when we repeat our oft told tale that the combined bath, properly used, while much more convenient, gives results quite as beautiful and quite as permanent as do separate solutions. We therefore have pleasure in saying that those who do not care to make up their own solutions may use Tonfixol with both confidence and success.

Of the Tolidol automatic developers, capsules containing enough for 20 ounces, we have often spoken, and frequently used; and although they are nominally made for all the different plates on the market, our experience leads us to believe that any one of the various capsules will be an excellent developer for any, or all of the plates. Among the samples is a new Velox developer, said to be an improvement on that first issued, although we thought that hardly possible; but we have tried it on both "special portrait" and carbon, and find that it leaves nothing to be desired.

From the care exercised by the Haller-Kemper Co. in the selection of their specialties, we have no hesitation in recommending them to all who want to do the best work with the least trouble.

THE HALF-TONE PROCESS.—From the Scovill & Adams Co. comes a booklet, of eighty-seven $4 \times 2\frac{1}{2}$ pages, that is really a multum in parvo of useful information on the half-tone process. Its main purpose is to tell all about the "Hago Screen and Diaphragm System"; which, from all that we can learn, is likely to improve the already wonderfully improved process methods; and in addition to that, it gives such a host of hints as to make it a valuable help to all engaged in that branch of work.

"THE PHOTO-MINIATURE."—This little monthly visitor—we cannot think of a better name for it, except perhaps, "a guide to photography in monthly parts"—keeps up its interest, and has evidently caught on. The June number is devoted to the hand camera, and tells all about that popular, but much abused instrument, that the beginner need to know. The *Photo-Miniature* is a capital idea, and the wonder is that it had not been thought of long ago.

"A REFERENCE BOOK OF PRACTICAL PHOTOGRAPHY."—Chicago: The Photo-Beacon Co. This is a reprint from the pages of the *Photo-Beacon*, and is really a multum in parvo; it has over 200 pages of about 6×4 , containing nearly 300 indexed items of information; always correct, and always easily found when wanted. This is Part Second, and the photographer who has both on his shelves need never be at a loss to know something at least about anything that may turn up; and generally that something is really all that he needs to know.

Camera Notes for July is, for once, not quite satisfying, although that may be our fault, or rather our misfortune, in not being quite up to its appreciating mark. The literary department is almost all occupied by Mr. Sadakichi Hartmann, on "Portrait Painting and Portrait Photography," much of it very good, but some of it

at least that all will not endorse. But it is the illustrations that have always given us most pleasure, and it is the illustrations in this that are, to us, not so satisfying as usual. That they are fine goes without saying or they would not have been there, but neither the portrait of F. H. Day, nor the "Decorative Figure," appeal to us as the pictures of *Camera Notes* generally do.

We are glad to see that the subscription list of *Camera Notes* increases by leaps and bounds, as there is no periodical published that better deserves a large circulation.

We see, however, one little slip in the notice of Nehring's supplementary lens. It is spoken of as a "negative" for the purpose of shortening the focus; whereas it should be, as it is, a positive. Although such auxiliary lenses have been in use for a long time, they did not become general till the Frena had them introduced as a part of its equipment; and now we see from an English exchange that they are on the market in sets of three, of varying foci of course, for 96 cents.

The Photogram for June adds another feather to the already big plume in the cap of its alert and able editors. It is a double number, double in interest as well as in size; and well worth the careful perusal of all who are interested in photography. We confess that the "Index to Photographic Trade Names," and the key thereunto, are as yet a puzzle; but when we have unravelled the riddle we see enough already to know that we shall find it useful.

"PHOTOGRAPHIC LIFE."—Nepera Park, the Photographic Life Publishing Co. We had thought that there were already a sufficient number of Richmonds in the field in the shape of photographic literature, to supply the all too few who care to read it; but it seems we were mistaken. The Nepera Chemical Co., who have shown themselves good advertisers, both as to quantity and quality, have resolved to have an organ of their own; and, in charge of Mr. Woodbury, late of the *Photographic Times*, have started *Photographic Life*, of which this is the first number.

The editor's "so many years' experience" has not given him a very exalted opinion of the intellectual calibre of the photographer, as he seems to think that he cares more for amusement than for information about the nature and properties of the material with which he works. That may be so. We have the *Judge*, and *Punch*, in our literature, and there is no reason why the photographer should not enjoy a laugh when he can.

Illustration is the strong point in this first number, there being a fine portrait by Moreno on the cover, and excellent examples of the work of Stieglitz and Eickemeyer in the inside; and with Dr. Baekeland at his right hand, we have no doubt that the editor will give the readers of *Photographic Life* something better than he promises.

After the above was in print there came from Messrs. B. French & Co. a revised price list, including a notice of a new anastigmat by Darlot, and a lot of useful information that makes it of interest to photographers generally. We shall have pleasure in telling our readers all about it in our next.

Letters to the Editors.

AUXILIARY LENSES.

DEAR SIR: THE AMERICAN AMATEUR PHOTOGRAPHER for June, '99, in "Society Notes," states that Mr. N. Nehring, on May 9, exhibited to the Camera Club his

new "Copying and Enlarging Lens." This is also the subject of a full-page advertisement in *Camera Notes*, although Mr. Nehring was informed in April, 1899, that the device he claims has been before the Patent Office in an application for patent rights by the undersigned since May, 1897. It is to be observed, in his advertisements, he no longer marks "his device" patent applied for.

Very truly,

C. E. C. KINNEY,

167 W. 93d street, N. Y. City.

[If the "Enlarging Lens" is nothing more than a single lens, to be inserted between the elements of a compound for the purpose of shortening the focus, it is improbable that a valid patent could be granted to either of you, as such have been in use for years, and are already articles of commerce. See some observations on this subject in "Our Table" and in "The Contribution Box," on another page —Eds.]

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tioga Centre, N. Y. (during July and August to Point o' Woods, N. Y.), reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

THE CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS.

The first of the season's outings of this energetic society was held on Decoration Day, the locality being the Elgin National Park, one of the most beautiful places on the beautiful Fox River.

The party, like the McAllisters at the time of the Flood, had a train of their own, so they could come and go as they pleased. The place is an ideal one for boating, fishing, dancing, and above all, and before all, for sketching and photographing, and we know the Chicago photographers well enough to be sure that they had a right good time.

MOBILE CAMERA CLUB.

This club has closed for the season, and will rest on its oars until November. The closing seems to have been with flying colors, as it was preceded by a very successful public exhibition of over 200 prints, many of them by some of the best known men and women on both sides of the water. The exhibition was held in the rooms of the Young Men's Christian Association, and was attended by a large number of highly gratified people.

But although we have said that the club will rest on its oars, the few active spirits will be busy all the time. With the Mobile, as with most other clubs, there has been uphill work; but by putting a "stout heart to a stey brae" the energetic secretary has got to the top. There are still several hundred amateurs in Mobile who do not belong to the club, and he will not rest satisfied till he has gathered them,

or most of them, in; and if we may judge for the future by what has been done in the past he will succeed.

MINNEAPOLIS CAMERA CLUB.

As usual, this club has kept on the go, an example that might be followed with advantage by some other societies. Since our last notice they have had several "expert" demonstrations; an exhibition of the Hamilton and Toronto slides; slides by members, including a very interesting set of birds nesting, and several little outings by way of practice for the great outing on Memorial Day, which will wind up the regular work of the season, and adjourn the meetings till September.

PORTLAND CAMERA CLUB.

This new club was organized on May 24, 1899, at Portland, Me., and has for its object the mutual improvement of its members and the exchange of ideas in all matters pertaining to photography. It is proposed to enter the American Lantern Slide Exchange, thereby securing at least twenty exhibitions the coming winter from the best clubs in the country, and there will doubtless be an exhibition in the fall, of work done by members.

The following officers and executive committee were elected: George F. Gould, president; Newell W. Edson, vice-president; Edgar R. Dow, secretary; J. Harry Lamson, treasurer. Executive committee: George F. Gould, Newell W. Edson, Charles B. Thurston, Sylvan B. Phillips, Herbert W. Robinson, William H. Shine, C. Fred Berry, Frank W. Woodman, J. Harry Lamson.

THE AMERICAN LANTERN SLIDE INTERCHANGE.

The season of 1898-99 may be called a successful one, more enjoyment in the way of exhibitions having been given to a greater number of clubs than ever before. In view, however, of the departure from the regular rules voted to be made in 1898, the average quality of slides was not up to former grades, and as a result, complaints about the poor quality of work, particularly of some of the smaller clubs, have been made to the general manager. At a special meeting of the board of managers, held in this city on June 20, 1899, at which F. C. Beach, W. H. Cheney and W. H. Rau were present, it was unanimously voted to rescind the resolutions adopted in June, 1898, which waived for one year the rule of the Interchange permitting the board of managers to accept or reject slides. This action was subsequently approved by one other manager—John P. Zenner, of Buffalo, N. Y. George Timmins has sent in his resignation, due to pressing business engagements. Herbert F. Smith, of Syracuse, N. Y., has been appointed as his successor. It was thought the method of examination and selection of slides by the board of managers at the annual meeting might be improved upon, and it is probable that some new plan may be adopted.

For the season of 1899-1900 clubs may send to the general manager by November 15, 1899, sets of 100 or more slides, not to exceed 125. All lantern slide directors are urged to begin early in promoting, either through the officers or committees, the collection of slides which are to represent their several clubs for the next season.

The Interchange is organized for the benefit of the several clubs composing it, and the aim is to furnish at regular intervals collections or sets of slides of good average quality for use at club exhibitions. New clubs wishing to join may be admitted by sending a set of fifty slides of good quality and a fee of \$10 to F. C. Beach, general manager, 361 Broadway, New York.

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander & Davis), Washington, D. C., from whom copies of the patents may be had.]

FRANK C. AXTELL, Short Hills, N. J., assignor to the Celluloid Co., New York, N. Y. No. 623,963.

A sheet or film of pyroxlin material having a coating of a mixture of gelatine, glycerine, and urea, overlaid with a sensitive photographic emulsion.

H. W. LOCKE, Rochester, N. Y., assignor to W. F. Carlton.

Reversible Back for Cameras. No. 624,057.

The camera box at its rear end is provided with pivoted catches. A frame adapted to fit within the rear end of the camera box is provided with recesses in its outer edges adapted to receive the catches, said recesses being so arranged that whether a given side be vertical or horizontal suitable recesses will be presented to receive said catches.

C. A. SNOW, Lime Springs, Ia.

Background Carrier. No. 624,111.

Upon a suitable support a horizontal reel is mounted, said reel carrying a plurality of background supporting rolls. A mechanism is provided whereby any one of the series of background rolls may be operated to roll up or unroll the background, said winding mechanism also serving to lock the reel against rotation when it is connected to one of the background rolls.

A. C. MERCER, Syracuse, N. Y.

Finder. No. 624,517.

The view is first reflected downward by a downward inclined reflecting surface and then is received by an upward reflecting surface, from which the view is reflected upward through the eye opening.

C. H. SHAW, New York, N. Y.

Panoramic Camera. No. 624,553.

The lens is mounted in a tube which is provided with vertical pivots at its ends. Extending rearward from the tube and in line to receive the view from the lens is another open-ended tube which forms a light shaft. Means are provided for turning the lens tube on its pivot and swinging the light shaft in an arc. The sensitive plate or film is supported in an arc at the end of the light shaft, and suitable shutters are provided to close the light shaft at either end of its movement.

B. D. SHEFFIELD, Livingston, Mont.

Gun Camera. No. 624,693.

A single chambered camera provided with the usual lens and plate holder is rotatively mounted on a gun stock. A rear sight and a fore sight are provided to secure the proper positioning of the camera, and a shutter mechanism operated by the gun trigger is carried by the camera and gun stock.

R. S. ATWATER, Western Springs, Ill.

Shutter. No. 624,729.

Comprises a single leaf shutter pivoted and provided with a double actuating spring, and two operating levers by which the shutter may be operated for time or snap shots.

S. D. ATTER and L. T. YOUNG, Philadelphia, Pa.

Flash Light Apparatus. No. 625,133.

The two poles of an electric circuit are brought close together and are connected by an inflammable insulating material. A mass of powder is then placed over the insulation. The current, when turned on, ignites the insulation, which in turn fires the flash powder.

M. C. RYPINSKI, Schenectady, N. Y.,

Plate Holder. No. 625,275.

The holder is a case formed with a slot in one end through which the plate is inserted end-wise, a suitable shutter being provided for said slot. A flexible slide is mounted in grooves, and means are provided whereby said slide may be slid from the front to the rear of the plate to make an exposure.

L. VON GRAVE, Wallingford, Conn.

Panoramic Camera Base. No. 625,392.

A stationary table is provided with a fixed stop and the pivoted camera-carrying table is provided with a scale and two simultaneously-adjustable stops which are always equal distances on each side of zero on the scale, and which are adapted to contact with the fixed stop on the stationary table. By placing the zero mark at the fixed stop the camera may be swung an equal distance in each direction therefrom.

E. KRONKE, Dresden, Germany.

Roll Holding Camera. No. 625,570.

A hand camera for film photography is provided with mechanism whereby with one single movement of the finger of the operator all the operations required for producing a picture may be performed, that is, the shutter will be set, then operated to make exposure, and the exposed film wound up.

W. V. ESMOND, assignor to E. & H. T. Anthony, of New York.

Roll Holding Camera. No. 625,660.

The camera frame and roll holder frame are formed of sheet metal. The roll-holder is formed with yielding sides, upon which the winding roller is mounted, and with a receptacle at its lower end which holds the film-roll.

Answers to Correspondents.

[Correspondents are requested to notice that communications intended for the editors, from July 1st to September 15th, should be addressed to DR. JOHN NICOL, *Point o' Woods, N. Y.*, where he will, as usual, give instruction in the theory and practice of photography.

H. W. HENSHAW, HAWAII.—We have forwarded your letter to the author of the picture.

F. L. WILSON.—You are right. A lens of $2\frac{1}{2}$ or 3 inch focus, on a plate 3 inches square, even although focused for practically parallel rays, *i. e.*, at "fixed focus," will give a photograph of such apparently false perspective as to seem ludicrous.

R. B. MILLER.—See article on primary colors on another page.

G. R. BOSWITH.—The list of magazines in our ad. columns includes only those

with which we have "clubbing" arrangements, and we do not think readers generally would be interested in the others.

J. S. CROCKET.—Makers would not find a demand for paper cut as you suggest, as every print should be trimmed to suit itself. A lens of the rectilinear type would suit you admirably, but its focus must not be shorter than 9 inches, and 12 would be better.

D. N. VAN HOESSEN.—The best book for your purpose is Burnet's "Essays," to be got from Tenant & Ward, 289 Fourth avenue, New York. Robinson's "Elements of a Pictorial Photograph," would also be helpful.

JOHN H. SCOTT.—Thanks for kind invitation. Our visits to New York are few and short, rarely more than passing through it to our summer home, at Point o' Woods. When we do spend a night in the city, we generally visit the Camera Club.

C. H. BEECHGOOD;—(1.) Either of the formulæ answers the purpose, but we prefer the latter. (2.) We take no notice of it; but find a freshly made up bath works better; that is, gives the desired tones in less time, after a few prints have been toned in it. (3.) Not if the solution is properly used; that is, if too many prints have not been toned in it.

W. S. BURT.—When we said that the only really important feature of a lens is its focal strength, we had the *stand* camera in mind; for the *hand* camera there is a second feature, hardly, if at all, of less importance, the working aperture. With the cheaper instruments, and single lenses, you are limited to the most rapid plates and most brilliant light; with the rectilinear, and its aperture of $f/8$, the same result is got in one-fourth the time, and the planer at $f/3.6$ is a little more than sixteen times as fast.

To R. G. BELL, W. BRICE, G. WILSON and SUSAN B, we would say that "The Right Road to Photography" will be ready shortly. It was ready for the binder some time ago, but the affairs of the printer have gone into the hands of a receiver, and the publisher has not yet succeeded in getting the brass dies for the covers from him.

PREMO.—You have too great faith in the post office. The negative came smashed into a hundred pieces, but we had no difficulty in seeing the cause of the stains; it is insufficient fixing. The plate had been removed from the fixing solution as soon as, or very soon after, the white bromide disappeared, instead of being left for at least half as long again, or, better still, twice as long. When the white bromide has disappeared the work of the hypo is only half done.

CONSTANT READER.—If you had been a careful, as well as a constant reader, you would have known that a 4 x 5 lens and a No. 3 stop conveys no information to us, nor helps us to answer one of your questions. Tell us the focus of the lens, and the f/x of your stop and we shall have pleasure in telling you all you want to know.

ARTHUR B. STRATTON.—We have repeatedly said that it is contrary to rule to give the addresses of our correspondents. If you will address a letter to Mr. Taylor, under cover to us, we shall have pleasure in forwarding it.

LUCY G.—Flower photography can hardly be called art, although much artistic taste may be displayed in their arrangement. If you expect to sell your work, you must do very much better. Use orthochromatic plates and a color screen, and strive to get something like true values; that is, as near an approach to the luminosity, or the light reflected from the various colors. Send again, when you think you have done your very best, and we shall be glad to help you.

R. M. WATSON.—The name on the lens is that of a dealer, and not a maker, and we cannot say anything about its probable quality.

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Photographers' Book of Practical Formulas,	Dr. W. D. Holmes,	.80	.60
Photo-Engraving,	W. T. Wilkinson,		3.00
Photographic Optics,	W. K. Burton,	1.00	1.50
Photography for All,	W. J. Harrison,	.25	.50
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Wilson's Mosaics, 50c.; Wilson's Photographics, \$4 00; Wilson's Quarter Century of Photography \$4 00; Year Book of Photography, 50c.

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SALE AND EXCHANGE.

[This department is for the benefit of SUBSCRIBERS who have photographic material, apparatus or books which they wish to exchange, and such wants will be inserted free of charge one time. For each additional insertion we will charge one dollar per month. Dealers advertising in these columns will be charged double our ordinary advertising rates.]

Wanted—To buy an enlarging camera; must be a good one and cheap for cash. Address, with description of camera and price, R. H. Clark, Holbrook, Arizona.

For Sale or Exchange for $6\frac{1}{2} \times 8\frac{1}{2}$ outfit, one 5×7 D. Swing Empire State outfit, 5×7 Darlot lens, Marvel shutter, six double holders, sliding tripod, 14 frames, and five other things, making a most complete outfit. Condition perfect. Cost about \$150. Ed. O. Ernst, 392 Main st., Memphis, Tenn.

Wanted to Exchange—Rotary printing press and outfit complete, size 7×11 , which cost over \$200, for quick 8×10 lens, or other photo goods. E. H. Newbury, Mystic, Conn.

For Sale—One 5×7 Premo, Sr. special camera fitted with Bausch & Lomb Shutter and Zeiss Series II.-A Anastigmat lens, case and tripod, good as new. Cost, \$95.00; will sell for \$50.00. R. S. Kaufman, Scranton, Pa.

Wanted to Exchange— 4×5 Adlake Camera and three joint sliding Tripod in good condition; cost \$15.00; Washburn Mandolin, good condition; cost \$25.00; for 5×7 Tele. Photo Poco; will pay difference. C. A. Prickett, Auburn, Ind.

For Sale—One 5×7 Manhattan Wide Angle Wizard, Ex. R. R. and W. A. lenses. Good as new, used less than a year. List, \$50 with one holder; will take \$29 for same with three holders; bargain. Will send C. O. D., if express is guaranteed. Reason for selling, want telephoto. Write to J. Stuehrk, Cedar Bluffs, Neb.



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This is a colorless, clear solution, which keeps indefinitely, and which merely requires diluting to be ready for immediate use.

In this dilute solution the negative or positive to be intensified should be immersed, when an immediate darkening takes place; at the end of about three minutes intensification is complete, and the plate must be washed from ten to fifteen minutes and then dried.

ADVANTAGES OVER PREVIOUS METHODS.

1. Intensification is completed by one manipulation.
2. It is not necessary to blacken the negative in a secondary solution, such as Ammonia, Sod. Sulphite or Cyanide of Silver, as is the case when using the ordinary Mercuric Chloride process, because:
3. When using Agfa there is no bleaching of the image.
4. Agfa does not produce a non-permanent stain, as produced by Uranium Nitrate. Thus it is easy to judge when the necessary intensification is arrived at.
5. The gradual building up of the image is plainly visible, and intensification may be immediately stopped when it has proceeded far enough, by withdrawing the plate and washing.
6. Agfa produces an intensification free from grain and without the pin holes that are present when the usual Mercury process has been used.

DIRECTIONS FOR USE.

Take of Agfa, - - - 1 part.

" Water, - - - 9 parts.

Be sure that all traces of Hypo are eliminated from the plate to be intensified.

Place the plate in above solution and rock slowly, until intensification is complete, which as a rule, will be in about three minutes.

Wash well from ten to fifteen minutes in frequent changes, or preferably running water, and then leave the negative to dry.

The solution may be used over and over again, but the action necessarily becomes slower as the bath becomes exhausted.

In case of negatives that have already been dried, soak for some time in plain water, in order to get the gelatine thoroughly saturated, thereby ensuring the equal action of Agfa all over the plate.

Local intensification may be carried out by means of a brush.

4 oz.	8 oz.	16 oz.
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No. 48a.

"THE GREED OF GOLD."

By C. G. Moore.

THE
AMERICAN AMATEUR PHOTOGRAPHER.

Vol. XI.

AUGUST, 1899.

No. 8.

Simultaneous Development and Fixing.

BY JOHN CLARK.



No. 201. By C. W. Plumb.
"A WATER SPRITE."

UST when to stop development, especially when working with various brands of plates, is sometimes a puzzle to even the experienced photographer, some even going so far as to recommend considerable over-development, trusting to reduction to bring the negative back to the desired density, and would regard any method that would make the development as exact, as, in the opinion of some at least, the exposure meter has made exposure, as the greatest advance of the decade.

This, according to Mr. McIntosh, in an article in *Photography*, has been found in Kachin, a new developer about to be introduced into the British market, and which, if what he claims for it can be sustained, will soon find its way to our stock houses.

Kachin is a white crystalline powder, freely soluble in water and possessed of excellent keeping qualities. The usual claim of having all the good without any of the objectionable features of pyro is made for it, but there is something more and something very much more important—it may be mixed with sodium hyposulphite to an extent sufficient to fix the negative, and in such a mixture development and fixing goes on simultaneously till both are completed.

We have often said that formulæ is indicative rather than imperative, and it is especially so in the case of new material and new methods; but



No 473.

By Helen L. Griswold.

"THE CLOSE OF DAY."

the following, as given by Mr. McIntosh, may be taken as a basis for experiment:

STOCK SOLUTIONS.

A.—Kachin	120 grains.
Sodium sulphite	1,200 grains.
Water up to.....	10 ounces.
B.—Sodium hydrate	80 grains.
Water up to.....	10 ounces.
C.—Sodium hyposulphite	5 ounces.
Water up to.....	10 ounces.
D.—Sodium sulphite	1,200 grains.
Water up to.....	10 ounces.

For a full normal exposure the following may be taken as a good working formula for a developing and fixing solution: A, 160 minims; B, 210 minims; C, 20 minims; water, 1 ounce. The procedure may be the same as in ordinary development, only somewhat slower, and after the image is fully out the operator need not confine himself to the dimness of the ruby light, but may finish the operation in ordinary gas light, with a little care, or with perfect safety under a single sheet of yellow glass or canary medium.

As the tendency of simultaneous development is to hardness, a full,

over rather than under, exposure is necessary, and although with suitable exposure a bromide is not necessary, Kachin is extremely sensitive to it, and a very slight addition will give sufficient contrast to considerable over exposure. Where the over exposure is such that even the added bromide does not give sufficient contrast, B may be reduced by one-half; and if, fixing should seem not to proceed apace with development, the proportion of hypo may be increased, but under no circumstances should that be done at the beginning of the operation.

When extreme softness is desired, A may be reduced by one-half, but the loss of sulphite must be compensated for by the addition of the necessary quantity of D.

When we think of the advantages likely to accrue from simultaneous development and fixing, we feel almost inclined to say "it is too good to be true"; but the claim comes endorsed by the editor of *Photography*, in whose judgment and experience we have faith enough to found our belief.

He says: "One of the first things to strike the attention in combined development and fixation with Kachin is the whiteness of the resulting image. In a few experiments we made ourselves in this direction we



No 485.

By C. H. Hamilton.

"ONWARD AND UPWARD."

found that using a developer of identical composition in both cases, except that in one sufficient hypo to fix the plate completely in about ten minutes was added and in the other it was absent, a first-rate negative resulted in each case, although in the combined 'developing and fixing' one the image possessed in a marked degree the white color indicative of deposited silver, a color absent in the other, which had all the appearance of a metol or other negative giving a black image. From this it seems highly probable that it is not merely the ordinary developing action which goes on during the fixing, but that there is in some way a physical development taking place at the same time. The effect of this, if it actually occurs, upon the density ratios it would be most interesting to know. Unlike the method of development after fixing due to Mr. Sterry, the exposure need only be a normal one for an excellent image to result."



Where Are We?

BY JAMES ROSS.

THE man that first suggested the idea of the hand camera, and the men who have done so much to make it popular, have much to answer for; and still more is to be charged against the "fatal facility" that has made the hand camera possible. According to the *Photographic Times*, there are in the United States 1,500,000 hand cameras, and, presumably, that number of amateur photographers—a mighty army either for good or evil. As the tree is known by its fruit, so is the state of any branch of art, at any particular time, known by the results of those who practise it. Judged by this standard, by the work of 99 per cent. of hand camera workers, photography is in a very bad way. Nor is that all. I am pessimistic enough to believe that it will be worse before it can be better, as the great mass of the people, by constantly looking at the under exposed "soot and whitewash," have lost the power of appreciation, and take for photographs what is unworthy of the name.

Let it be thoroughly understood, however, that the fault lies not with the hand camera. but with its improper use; the attempting to do with it what cannot be done. To the bulk of those who use them all hand cameras are more or less alike, and they try to do with a \$5 instrument and a lens working at $f/16$ what would require a Planar, at $f/3.6$, working over sixteen times as fast.

With a suitable hand camera and the knowledge of how to work it,

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• "SECRETS"
BY
A. E. MERGENTHALER.

No 414.

what it will and will not do, work of the very highest class may be done; indeed, some of the best pictures that have ever been on the walls of the greatest exhibitions have been enlargements from such negatives. But such knowledge and such cameras are, as yet, possessed by but a few, and indeed, the camera, at least, is beyond the reach of most, the lens alone costing over \$70, and until that knowledge becomes something like general, photography cannot be expected to rank higher in public appreciation.

In reply to the question where are we? then, I would say that we are about as low as we can be. Of the 1,500,000 amateurs, those whose work is true in values, a quality absolutely essential to pictorial effect, and one which cannot be obtained by ignorant snapping, may be counted on a very few pairs of hands, certainly not amounting to more than two figures.

What is the remedy for this state of matters it is hard to tell; but in this, as in other diseases, the first thing is to find the cause. The most influential is too favorable criticism of partial friends, and especially when these have some knowledge of art, and should, and do know better.



No. 499.

"CASA NOVA IN POMPEII."

Miss M. R. Case.



No 489.

"ON THE DELAWARE."

By J. F. Williams.

Hardly less injurious is the kind of photograph too often reproduced in the photographic journals, *THE AMERICAN AMATEUR PHOTOGRAPHER* not excepted. For some reason, which I do not care to guess, illustrations frequently appear that, making all due allowance for loss in reproduction, are evidently from negatives utterly unworthy of the honor. I do not refer to the art that may or may not be in them, but to the false values; the absence of half or middle tints; the jump from white to black, without a trace of the delicate gradation that should be between.

Partial friends and publishers should take it to heart; should realize the influence they have, and not praise or publish a photograph that does not show all the various degrees of luminosity reflected from objects included in it. The careless or ignorant snapper should be honestly told that his work is worthless, that the alleged "fatal facility" is a mistake, and that the making of a photograph worthy of the name is surrounded with difficulties that can be overcome only by much study and long practice.



HUMAN nature is so constituted that all see and judge better in the affairs of other men than in their own.—*Terence*.

Control in Development.

A NEW METHOD, BY R. R. RAWKINS.



No. 300.

By C. W. Plumb.

"AN INTRUDER."

IN architecture, as in landscape, one often comes across subjects in which the contrasts are very harsh, the darkest portions standing out sharply against the highest light. These subjects are most attractive looking, but if we are tempted to expose a plate on one of them it will be found on development that by the time the high lights are fully developed the shadow portions are absolutely without detail. On the other hand, if sufficient exposure is given to secure detail in the

shadows, the high lights will become either blocked up on development or reversal of the image will take place, especially if a rapid developer, such as metol, is used.

The accompanying photograph was taken from the interior of a very dark passage, the brightest sunlight outside and partly shining through the door. A Warwick instantaneous plate backed with caramel was used. Collinear lens, $f/16$ exposure two minutes. The correct exposure for the exterior would have been two seconds at $f/16$, but in order to secure detail in the interior an exposure of two minutes was necessary.

The developer was made up as follows:

Sodium sulphite.....	2 ounces.
Warm water to make nearly.....	20 ounces
Add a small crystal of citric acid.	

In a separate vessel put

Hydroquinone	$\frac{1}{4}$ ounce.
Potassium bromide	60 grains.
Potassium ferricyanide	6 grains.

Pour the warm sulphite solution into this vessel, and when the salts are dissolved, bottle off as usual and label No. 1. No. 2 solution is made up as follows:

Potassium carbonate	2 ounces.
Water to make.....	20 ounces.

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"HAYING."
BY
H. P. DAHLSEN.

The other materials required are a bottle of rodinal, a 10 per cent. solution of potassium bromide, some pure cotton wool and a sheet of plain thin paper the size of the negative to be developed. These should be arranged close at hand with a developing dish and a bowl of clean water. The bromide and the rodinal should be put into separate cups, and a tuft of cotton-wool inserted in each. The developer is now made up in the following proportions:

No. 1	2 ounces.
No. 2	30 minims.



"QUEECHY LAKE."

By Henry Popp.

It will be noticed that a very small proportion of accelerator is given, the object being to gradually build up the image by the addition of more accelerator as required.

The plate is now taken from the dark slide, dusted, the backing cleaned off and the developer applied. Rock the dish vigorously and carefully watch for the appearance of high lights. This will probably take some time, but if nothing appears in, say, six minutes, pour off the developer and add a few drops of No. 2, repeating this operation until the desired density is reached. The developer is now poured off, and it will be found that the shadow portions of the negative are quite clear and with-

out detail. The plate is now placed in the bowl or dish of clean water, the **sheet** of paper pressed into contact with the film, removed from the water, **and** held up to the dark room lamp. The developed portions should now **be** lined over by tracing on the paper with a soft pencil, the paper **re-****moved**, and the marked portions cut away with a pair of scissors. The **mask**, which should be cut just outside the pencil line, in order to make **the** mask slightly larger than the developed portion of the negative, is now **painted** both sides with the bromide solution, and carefully placed in con-



Frederick L. Smith.

"GOOSE FALLS, PENOBSCOT BAY, ME."

[Class II., Beginners' Competition.]

tact with the film over the portion already developed. Care must be taken **not** to make the mask too wet, or it will slip about on the film. The **shadow** portions of the negative are now developed as follows: Level the **plate** and take the tuft of cotton wool charged with rodinal and paint over the shadow portions, using as little solution as possible, but taking care just to touch the edge of the paper mask. The details will come up very quickly, some of the developer finding its way under the mask, which has the effect of softening what might have been a harsh line. As soon as suf-

ficient density is obtained the plate should be washed under the tap, when the mask will slide on.

If the painting has been carefully done, the negative, after fixing, washing and drying, should show no signs of unequal development or markings of any kind. A rough print is now taken, and if the result is not quite satisfactory, the negative can be backed on the glass side with *papier minérale* and worked on with a charcoal stump or soft lead pencil in order to strengthen the lights, or the *papier* can be cut away over the portions that require to be sunned down or darkened.

Very good practice may be got by photographing an ordinary room facing and including the window, using a backed plate, exposing for the shadows, and developing as described. The amount of accelerator to use will depend entirely upon the exposure given, and in one case I found that where the high lights received nearly a hundred times more exposure than the shadows, the developer brought out a strong image by the addition of only a few drops of accelerator.

Pyro and metol may be used instead of hydroquinone and rodinol, providing the proportions are about the same. The addition of potassium ferricyanide has the effect of clearing the image to a remarkable degree, and I have frequently developed stale plates with the developer as described and obtained perfect results, whereas by omitting the ferricyanide, plates from the same box have been hopelessly fogged on development.—*Photography*.

Notes.

FLASH LIGHT POWDER.—Some time ago we noticed Lainer's recommendation of sodium nitrate as a constituent of flash-light mixture, and are now glad to see that George Rau, in the *American Journal of Photography*, confirms all that we then said about it. This is what he says:

The ammonium nitrate being somewhat hygroscopic, it is necessary to fuse the salt before its use, and to keep it pulverized in a well-stoppered bottle. The powders should be perfectly dry and finely powdered, and then mixed with a feather on a sheet of paper. As to the quantity of the required flash-light powder, the author states that he has obtained perfect negatives with plenty of detail in the shadows by using a mixture consisting of 0.3 gramme (about 5 grains) of magnesium powder, and 0.3 gramme of ammonium nitrate, the lens being stopped down to $f/7$, and the distance of the subject from the lens amounting to about 6 feet. The volume of smoke given off was so small that five successive exposures could be made in the room without the least disturbance to the occupants. In tak-

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"WHEN THE SHADOWS ARE LONG."
BY
HENRY STARK.

ing a photograph of a room 15 x 15 feet, the author obtained a sufficiently exposed negative by using a mixture of 1 gramme of magnesium powder with 0.8 gramme of ammonium nitrate. The rate of combustion with this new flash-light mixture is perhaps not quite as rapid as with some other mixtures, but, nevertheless, it is sufficiently quick to enable the operator to photograph by means of it portraits and groups, provided that the constituents of the mixture are perfectly dry and finely powdered, and that the mixture is spread over a thin film of gun-cotton, which may be ignited by means of a taper fastened on a long rod.

Those who employed ammonium nitrate in the preparation of "laughing gas" in the long, long ago, will remember something of its hygroscopic nature, and realize the necessity for fusing it so as to drive off every trace of moisture, and then to keep it in bottles with thoroughly tight corks, even corks well soaked in melted paraffin. Glass stoppers are rarely to be trusted.

RESTRAINING DEVELOPMENT.—Dr. Leo Baekeland in *Photographic Life*, says that one or two teaspoonfuls of sugar added to four ounces of velox developer will so restrain its action as to enable the operator to see what he is doing and to do it without hurry, without in any way affecting the result. Glycerine has long been used for the same purpose, and is, on the whole, better and easier managed than sugar, especially when brush development is employed, and we like the brush much better than immersion. It is far more economical, and gives far more control.

PHOTO-SEALS is the latest of the many novelties introduced by those of our British photographers who aim at making business instead of waiting until it comes. They take the form of adhesive wafers, having in the center a portrait or other photograph for attaching to postcards, envelopes, etc., and in assorted colors. They are made from any photograph at a cost of about one dollar for fifty, or \$1.75 per 100.

COLORING SCREENS.—For the purpose either of increasing the contrast between different colored objects in a specimen, or of reducing it, there are useful adjuncts to the equipment of the microscopist and the photo-micrographer. To obtain perfection of definition and of contrast either for visual or micro-photographic work, the use of partial monochromatic light is essential when working on bacteria and similar subjects; and the following plan for making reliable screens may, therefore, be of assistance to those who are engaged on this branch of study. It was first suggested by Mr. Wall to Dr. Spitta, the author of "Photo-micrography." Coat a patent plate with 2½ per cent. solution of albumen; and, when dry, pour over it 170 minims of an 8 per cent. solution of gelatine, level and allow

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"REFRESHING."

BY

W. M. GRIFFITH.

No. 495.

to dry. To make red, orange, green, or violet screens, soak the prepared plates in a 1 per cent. solution of crysiodine, aurantia, naphthal green, and methyl violet respectively. For yellow screens soak the plate in a solution of 20 grains of picric acid, dissolved to saturation in absolute alcohol, 2 ounces of water and a little ammonia.—*Microscopical Journal*.

PHILADELPHIA NATIONAL EXPORT EXPOSITION.—Great efforts are being made to make this one of the most important displays that has been made in this country. Of special interest to photographers is the fact that a large dark room will be provided for the use of visitors. This will be located on the second floor of the main building, and will contain all the latest appliances for the development of films and plates. It is expected that the amateur photographer will be attracted to this exposition from all over the country on account of the number of foreigners who will be present from every portion of the earth. The International Commercial Congress will be practically a gathering of all the human race, as delegates will come from Europe, Asia, Australasia, Africa and all the Americas. The Kodak fiend and the camera student will have an opportunity to take pictures of strange people from all quarters of the globe and secure impressions of quaint and curious costumes that they could not get in any other way. The display of photographic goods and supplies will also be the best ever shown.

SPECIALIZATION.—The writer of "Photographic Jottings" in the *Glasgow Evening Times* strikes the nail on the head in the following paragraph: "There is too much scattered energy about the work of the majority of amateurs, and, consequently, too many amateurs who never know the real charm of photography. If every camera user fixed upon a definite plan of work for the main portion of his photographic exertions the gain would be immense all round. Let me illustrate my meaning more fully. There are many subjects which offer a pleasant hobby for the photographer, such as botany, natural history, or architecture. Having selected the most congenial of these, the amateur should secure a standard hand-book on the subject of his choice, and then set to work to illustrate it by his own photographs. Of course this will be a slow process, but its educational value will be enormous, and the camera will have enabled the user to secure such a knowledge of his subject as could be obtained in no other way."

THE LATE W. BLANCHARD BOLTON.—We notice with regret the passing away of this earnest student of matters photographic and voluminous contributor to its literature, which occurred on the 12th of May last. He was for some time editor of *The British Journal of Photography*, but was best known as having, in conjunction with Mr. Syce, introduced the col-

iodio-bromide emulsion, and later, the washed emulsion methods. To us personally there is a special element of sadness in the passing away one by one of the earlier workers, as of the few now left the time of the last cannot be long delayed. Our acquaintance with Mr. Bolton began over forty years ago, when, a slim young man with camera in knapsack on his back, he appeared in our laboratory, introducing himself as W. B. B., and from then till shortly before his death we continued to keep track of each other. He was a patient, steady experimenter, and has left behind him much good work, for which he will be long remembered.

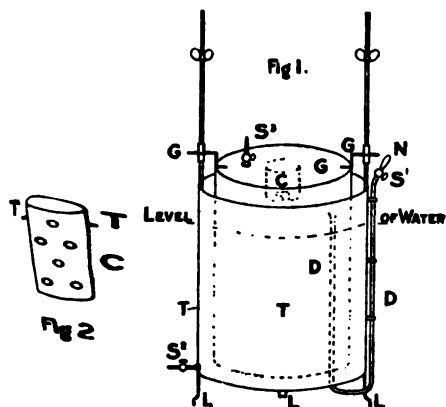
A Home-Made Acetylene Generator.

BY CIVIL ENGINEER.

A **SERVICEABLE** generator for the preparation of acetylene gas may be made by any amateur, provided he knows how to use a soldering iron (failing which the services of a friendly tin worker can be enlisted) at a cost not exceeding 7s.

Procure at any ironmonger's two what are known as straight-sided galvanized iron buckets, the same depth, but differing in diameter from two to three inches; the larger (T in sketch, Fig. 1) is to be the tank, the smaller, G, the generator. The sizes of the buckets in sketch are 13 inches high by 11 inches diameter, and 13 inches by 8 inches.

In the bottom of T at a distance of about three inches from one side, punch a hole sufficiently large to take a piece of half-inch compo gas pipe (in the present case you will require about three feet).



Having straightened about twelve inches of the piping, pass it through the hole into the tank and *carefully solder*. The length of pipe inside the tank must be about one inch less than the height of the generator. Now, with gentle pressure, bend the pipe in the form of a U, the curvature of the U being sufficient to allow the outside arm to clear the side of the tank by about half an inch. This arm should be longer than the outside of the tank by two inches. To its extremity attach a nozzle N with stop-cocks S¹. The gas fitter who supplies the piping will supply the fittings if

you tell him what you require. This, complete, is the delivery tube (D, Fig. 1).

At the extremities of the upper end of the tank and on the inside are riveted two iron rods. The tops of these rods should be fifteen inches above the upper edge of the tank, and have a thread cut on them for a distance of six inches; each rod is to be provided with a fly nut.

These rods act as guides to the generator ascending or descending, the fly nuts prevent the generator from being forced out of the tank by the upward pressure of the gas. I may as well add that with the charge recommended in the subjoined directions for use there need be no fear of such a contingency.

At the side opposite the delivery tube affix a half-inch gas union (S^2 , Fig. 1); this is for emptying or lowering the level of the water in the tank.

Three lugs soldered to the bottom rim of the bucket at equal distances apart form the legs.

The next part to be taken in hand is the container (C, Fig. 2).

It consists of a cylinder of strong zinc six inches high by two and a half inches diameter, and open at the top. About a dozen quarter-inch holes are punched in the sides, not in the bottom. At opposite sides, two holes are punched; into these are inserted from the inside rivets; they are retained *in situ* by solder, and form the trunnions (T, Fig. 2).

We will now make a zinc collar three inches deep to fit tightly over the container; this collar, with the bayonet joint, is shown at C, Fig. 1.

Having made the collar, place it over the cylinder, and mark where the trunnions come in the collar slots thus. This collar is soldered to the inside of the smaller bucket or generator at the center (see C, Fig. 1). A small stopcock S^3 is let into the top of the generator, its position being immaterial. You next require some $1\frac{1}{2}$ -inch hoop iron, and a piece of brass tube about four inches long and half an inch internal diameter; the kind used for fishing-rod joints will do.

Take a sufficient piece of the hoop iron and bend it thus, cut the brass tube in half, and having punched a hole in one of the bends, pass one piece of the tube through the hole, securing it at its center with solder; make a second similar to this.

¹ Place the generator centrally in the tank, pass the guides over the rods, and secure them by solder to the top of the generator.

It goes without saying that all the soldering must be well done, and the whole apparatus carefully tested for any leakage.

To Charge.—By means of a piece of red india rubber tubing attach the nozzle N to the gas jet, which should be outside the lantern.

Take the generator out of tank, fill the tank with water to within four inches of the top, place a charge of six to eight ounces carbide in the container, which place in its collar in the generator, giving it a turn to the left to lock it in place. Now place the generator in the tank, and put on the fly nuts.

To set going turn on the gas jet nozzle and the stopcock S^2 ; the generator will now descend into the tank by virtue of its weight. As soon as it shows a disposition to rise close S^2 , and apply a light to the jet, which will attain its full brilliancy in a couple of minutes, when the jet may be placed in the lantern.

With a good sample of carbide this charge will give a light sufficient for an hour at least. Personally, I prefer making the gas some time before using, so as to have it cool.

I have had this generator in use for the past eighteen months or more, and find it to act most satisfactorily; it cost me 6s. 6d., if I recollect aright.

When it is desired to put out the light close the stopcock S^1 before turning the gas off at the jet; the gas in the generator will keep until it is all used up; only see that the water lost by evaporation is replaced.

On the Development of Partially Printed P. O. P.

COMMUNICATED TO THE VIENNA CAMERA CLUB BY HERR. SCHNAUSS.

I HAVE used for this purpose the kind of collodio-chloride emulsion paper which is known under the name of "Matt Papier" (matt paper) in this country, but I think that other printing-out papers will suit as well. The paper is printed under a negative by daylight only for a short time (a minute being quite sufficient in good light), until the image is visible in its outlines, when it is placed directly in the developing solution, and, by floating, developed up to its full vigor. After washing, the print is fixed either in a plain ten per cent. solution of hypo or in the combined toning and fixing bath. The developing bath consists of an acid solution of any of the known reducing agents, without any further addition, and each developer has its own characteristic tone which it imparts to the print. I recommend the following formulæ, which may, however, be modified, if required, by taking more or less acid, according to the brand of paper used. In each case a ten per cent. alcoholic solution of the chosen reducing agent is prepared, and more or less of it is added to the developing bath, according to the rapidity of its action or to the tone required (the

tones, as a rule, become the richer the more of the reducing agent the developing solution contains). This solution keeps well, and the developing bath remains perfectly clear, so that any further addition, as fish glue, etc., is quite needless:

1. GALLIC ACID.

Water	120 cc.
Gallic acid (ten per cent. alcoholic solution)	2 cc.
Acetic acid	6 drops.

This gives a reddish-brown tone which turns to a pure red chalk in the plain ten per cent. hypo bath.

2. PYROCATECHINE.

Water	120 cc.
Pyrocatechine (10 per cent. alcoholic sol.)	3 cc.
Acetic acid	6 drops.

This gives a very agreeable sepia tone in the ordinary fixing bath, but the whites remain much purer than in the case of gallic acid. The development takes, however, a very long time.

3. PYROGALLIC ACID.

Water	120 cc.
Pyro (ten per cent. alcoholic solution)	1 cc.
Acetic acid	5 drops.

This yields reddish tones in the ordinary fixing bath, but also the highlights are slightly stained. Personally, I do not esteem this staining of the lights as a failure, since a more homogeneous tone is obtained in this case than if the lights remain clear, the latter being represented by the plain paper, which is generally of a pink or mauve surface, giving then rise to double tones.

4. ORTOL.

Water	120 cc.
Ortol-Hauff (10 per cent. alcoholic solution)	2 cc.
Acetic acid	5 drops.

The prints developed with this solution should afterwards be treated with the combined toning and fixing bath, where they acquire a beautiful rich purplish tone, which is specially suited for portraits.

5. METOL.

Water	120 cc.
Metol (ten per cent. alcoholic solution)	$\frac{1}{2}$ cc.
Acetic acid	6 drops.

This is, in my opinion, by far the best developer for this purpose. It gives by subsequent treatment of the prints in the toning and fixing bath splendid warm brown tones, which are the deeper the more of the alcoholic metol solution that has been added. In this case, however, the developing process proceeds rather quickly, and care should be taken to put the print at once in the water bath as soon as the desired tone has been obtained.

The utmost cleanliness is required in working out this process, and until the prints are developed they should be handled as little as possible. It is well to cut the paper a little larger than the size required, and to take it at one of these "safe edges." It is also absolutely necessary to keep the developing dish and fingers uncontaminated by any other chemicals, or spots and stains will be the result. Between developing and fixing the prints should be well washed, in order to free them perfectly from the acid which adheres to them, and which would otherwise produce sulphur toning. The process may be carried on in weak daylight; by using it one may save much time, and produce tones which are otherwise only obtainable with the pigment process.

The Forty-Fourth Annual Exhibition of the Royal Photographic Society.

THIS, the premier exhibition of Great Britain, will be held from September 25 to November 11, in the usual place, 5A, Pall Mall. We hope that, as usual, picture makers on this side will take their place beside their more favored brethren, and also, as usual, carry off some of the best awards.

The exhibits and filled up entry forms must be delivered at 66 Russell Square, London, W. C., on or before Tuesday, September 15, addressed to the Secretary Royal Photographic Society, who, on application, will supply prospectuses, entry forms and all needful information. We have been favored with a number of prospectuses and entry forms, which we shall have pleasure in forwarding to intending exhibitors.

The American Lantern Slide Interchange.—It will be of interest to the clubs in the Interchange to know that several new clubs are preparing to enter this coming fall. The present clubs are urged to begin early the preparation of specially selected sets of slides, which should be sent in to the General Manager, Mr. F. C. Beach, 361 Broadway, New York, on or before November 15 next. The 1899-1900 season begins December 1, 1899.

The Photographic Salon.

THIS annual and always interesting exhibition will be held in the usual place, the Dudley Gallery, from September 22 till November 4. Prospectuses, entry forms and all necessary information can be got from Mr. Reginald Craigie, the Camera Club, Charing Cross Road, London, W. C.. Here there are no awards, but the honor of being hung is, as we have often said, of more value than many medals.

Copying Prints Without a Camera.

THEODORE BROWN, in *Photography*, gives the following method of printing from engravings or photographs without camera or lens: The illustration or silver print to be copied (on the back of which there must be no printed matter or writing) after being soaked in water is squeegeed into the surface of a dry plate—the face of the picture being in contact with the film of the plate. The plate is then placed in an ordinary printing frame with the back of the print outwards. A double thickness of tissue paper having previously been fastened over the front of the frame, the whole is exposed to the light of a candle or lamp, etc., the back of the print, of course, facing the light. All these operations should be carried out in the dark room, as there is then no danger of fogging.

The exposure to be given depends, of course, entirely upon the rapidity of the plate, the thickness of the print, and the kind of light used. In consequence of this it is practically impossible to give any definite instructions as to the length of exposure; the operator must decide this for himself, after carefully considering all the conditions under which he is laboring, but he will not be far out if he gives the same exposure as he would if he were making a lantern-slide from an ordinary negative.

The plate is now removed from the printing frame, and the print is taken off. If it is desired to keep it, all that has to be done is to dry it or to squeegee it on to a ferrotype plate, when it will be in quite as good condition as it was originally.

The plate is then developed in the ordinary way, the operator using whatever developer he has been accustomed to.

The negative thus obtained, if proper care has been taken, is the very best that can be made from the print, every detail being reproduced with surprising clearness. The advantages of this method are that no camera is required, the only apparatus used being a common printing frame, and

that the negative, and consequently the copies therefrom, are practically of the same size as the original print. There is, moreover, no danger of this negative suffering from spreading of the lines, as the face of the print is in actual contact with the film itself. This advantage is realized particularly in the copying of diagrams, where the white greatly predominates over the black lines.

Recent Triumphs of the Camera.

A TOAST GIVEN BY GEORGE C. BLAKSLEE AT THE ANNUAL BANQUET OF THE PHOTOGRAPHIC ART CLUB OF THE ILLINOIS COLLEGE OF PHOTOGRAPHY, AT EFFINGHAM, ILL.

PHOTOGRAPHY is becoming universal. The camera is taking rank with the telephone. Not only as a social factor, but in the scientific and commercial world as well, it is now well nigh indispensable.

Its progress has been one continuous triumph.

Art has its decadence. Literature has ebbed and flowed like the tide, but never from the first triumph of Daguerre to the present hour has photography taken a backward step.

The contest between the pen and the sword still continues, but the camera rises above them both, cuts the Gordian knot, and in the language of the College of Photography motto is "The noblest Roman of them all," or words to that effect.

As I to-day look back over the many noted accomplishments of recent date I feel like the boy in the melon patch with the farmer's dog coming, that I cannot do justice to the occasion.

Enough only will be mentioned to show the magnitude of photographic advancement.

A great railroad company has just introduced, and has at work to-day upon its various lines in the Northwest a photographic car, completely fitted with everything pertaining to the art, and from which its operators will secure not only the scenic beauties of the line, but the industrial conditions as well. Within a year the general manager will have at hand, and the directors at their disposal, not simply the blue-print drawings of shop and yard, but the actual visible conditions of those places, together with track and bridges, depot and rolling stock, evidence indisputable for all conditions and all emergencies.

The revolving panoramic camera, just introduced, by which an extended landscape view can be taken at one sweep of the lens, is a triumph of no little importance.

Not only will it be hailed with joy by the tourist, but must prove of untold value along commercial lines.

Real estate and insurance agencies will be glad to avail themselves of its productions, while its work will prove of increasing value to civil and sanitary engineers as well.

A more recent triumph, and one whose far-reaching effect is scarcely realized as yet, is the photo-electric weaving process. This bids fair to revolutionize the whole textile industry and through it, Gobelin tapestries, so long reserved for merchant kings and princes of noble birth, may be brought within the reach of those of equal taste but more moderate means.

The pattern or design, which was formerly traced with such laborious skill upon the screen, requiring weeks and months of effort before the weaver could begin his work, is now, through the medium of the camera, photographed in a few minutes.

Naturally also, the old loom is now too slow, and the photographer having pushed the button, electricity does the rest.

Along a different line of effort, though by no means less difficult, may be mentioned the recent photographic survey of 50,000 square miles of Western Canada.

Aside from the knowledge of geometry and perspective required, the nicety of adjustment of the camera, lens and holder can scarcely be realized.

The number of difficulties to be overcome, and complete success of the expedition, mark this as an achievement without a parallel.

Aerial photography is by no means new, but it remained for a Chicago inventor to so perfect it that he can control not simply the altitude of the camera, but its steadiness and its position with regard to points of the compass.

The angle at which it is set can also be adjusted for distant views, giving to this invention the promise of great value in our future military and naval operations.

Once again we look skyward, and this time through the medium of the ray filter the landscape takes on its old time charms. Now our camera shows not simply the unvarying sweep of a burning tropical sky, but we may catch the light, fleecy clouds of a summer day, or note the wondrous harmony of light and shade as we watch the oncoming rush of a winter storm.

This is a practical age, however, and the Cellograph stands forth as the latest and most perfect invention of its kind. With its miles of film, its twenty-seven exposures per second, its twenty-seven finished pictures shown in like time, our subjects take on life and action. No longer need

our illustrations be run in a mould, or our friends be idealized beyond recognition.

In the near future, by the aid of the Cellograph we may stand upon the corner of the crowded street and note the throng of shoppers as they hurry past. We may watch the boys in blue at dress parade, and feel our pulses tingle as the old flag goes to the right of the line, or we may slip away from life's hurry and care and join the children as they romp and play with unbounded glee in the kindergarten.

Then, too, I think my statement cannot be called in question if I count both flash light and color photography as among our recent triumphs.

The latter, as yet while hardly perfect, is giving us to-day, for all that, a single picture in which we may have the matchless tints of that floral masterpiece, "The American Beauty," or the rich colors in the evening dress of an "American Belle." The former, while not new as regards attempted use, is a recent achievement when it comes to artistic effect.

If our work is to show feeling and life, if the expression of joy or sorrow, tears or adoration is to be real, we must catch them by some such means.

You cannot secure in the carefully posed and tilted sitter the fleeting smile of childhood, or the listening look of an old man in his chair, waiting for the coming of a familiar step.

Flash light tells a story!

When Mark Antony, standing at the bier of the martyred Cæsar, would arouse the slumbering patriotism of his fellow countrymen, he held up before them the rent and blood stained garment of the conqueror. Pointing to the dagger holes he cried, "Look! In this ran Cassius' dagger through, through this the well beloved Brutus stabbed, and as he plucked the accursed steel away, mark how the blood of Cæsar followed it." I have no visible forms with which to awaken your enthusiasm, but I believe he who does not feel his nerves tingle and his pulses quicken as he recounts the many triumphs of the camera in all its varied fields is unworthy of his profession.

Like the gunners of our navy in our late war, the triumphs have come not alone from the new attachments of the camera, but from the character of the men behind it.

Watch Nansen as he shifts his rifle and grasps his camera to take a snap shot of a polar bear ten seconds before the bear would have snapped him.

Stand with Professor Hale in his magnificent dark room as he scans his freshly developed plates and finds the secret of the heavens revealed thereon.

Follow Davis in Cuba as he focuses his camera on a battery in action, or Frost and Bowlby as they picture for us, not impossible ships in impossible positions drawn by staff artists twenty miles away, but an actual bombardment and sinking vessels, taken through a rift in the smoke of battle, and you realize as never before the triumphs of the camera.

Through it and its accessories one may now sit in an easy chair in the comfort of his own home and without a turn of his head witness the beauties and the industries of his country unrolled before him.

He may also look upon the hundred isles of Casco Bay, or watch the waves as they dash their spray over the Seal Rocks inside the Golden Gate.

He may see those great floating palaces as they round the bends among the Highlands of the Hudson, or follow the voyage of the rafters on the broad yellow bosom of the Mississippi.

Yes, he can see, and see so distinctly that he can fairly hear the click of the binder in the wheat fields of Dakota, or the hum of the reaper in the corn lands of Kansas.

He may stand amid the tall pines of the lakes, or in the cotton fields of the gulf.

It is the camera that acquaints us with our New America, and brings their distant lands within our ken. Through its eye we may walk beneath Hawaii's stately palms, or with the bathers watch the breakers in its rolling surf.

Side by side we may see the broad tobacco fields and the tangled tropic undergrowth of the Philippines, or may note the picturesque dress of the natives on the rich plantations of Puerto Rico.

Right proudly then we point to the triumphs of the past and expectantly look to the future, for

"We are living, we are dwelling.
In a grand and awful time,
In an age to ages telling,
To be living is sublime."

The Wanamaker Competitlen.

John Wanamaker, of Philadelphia, proposes to hold an exhibition of competitive photographs, November 11 to 18 next, made by amateur photographers. John Wanamaker offers \$160 in cash as prizes, to be divided among the following groups: A. Landscapes; B. Marine Views; C. Portraits; D. Group Portraits or Genre Work; E. Miscellaneous. Various other prizes are to be offered by manufacturers of papers and plates.

The excellence of the pictures is to be judged by three competent persons, who will have authority to accept or reject any pictures, and decide those worthy of prizes. Their judgment will be made on the following points: 1. Is the subject interesting? 2. Does the picture fully illustrate what is intended? 3. Is it shown in an artistic manner? 4. Is the photographic technique meritorious?

Inequality of Illumination.

BY W. K. BURTON.

EVERY photographer has the knowledge that, from the center of the plate there is a falling off of light toward the edges, and more particularly toward the corners, and, of course, there are many who know exactly what that falling off is, and by what factors it is regulated, but we fear these are in the minority, and that the majority have only a very vague notion that there is a falling off. This seems to be indicated by the fact that opticians not infrequently advertise lenses as giving equal (in some cases even perfectly equal) illumination through a wide angle. Now, it should be distinctly understood that, without the use of either of two devices to be described hereafter, which have very seldom been used, and which are known to be comparatively few, no lens can give perfectly equal illumination through any angle at all! Yet we have not noticed exceptions taken to the "equal" illumination, or even to the "perfectly equal."

THE FACTORS INVOLVED.

There are two factors in causing falling off of light in any lens in the case of oblique pencils. One is entirely of an optical nature, the other of a purely mechanical nature. These I intend to discuss briefly, though I have very little new to offer, but will rather try to bring together a number of scattered notes on the subject.

THE OBLIQUE RAYS ARE LONGER.

Let us suppose a wide-angle lens mounted "flush," that is to say, with no part of the mount projecting in front of the front lens, nor behind the back lens. We believe such a lens has never been made for photographic purposes, on account of the great difficulty there would be in fixing the lenses to the mount, but there is no impossibility in the matter. A small stop is used, and the case of an oblique pencil is examined. It will be found that the relation of the lengths of the axial pencil to that of the oblique is as the cosine of the angle between the axis of the lens and the oblique pencil. In other words, half the angle subtended by the lens.

If we further consider the length of the oblique pencil, we find that it is longer than the axial pencil, and we have the well-known rule that, with given apertures, the light varies inversely as the square of the length of the pencil. This gives us a diminution of light at the rate of \cos^2 .

VIEWED OBLIQUELY THE DIAPHRAGM IS NOT ROUND.

Then let us look at the circular aperture of the diaphragm obliquely, and we shall find that it no longer has the appearance of a circle, but of an

ellipse, the major diameter being that of the circular stop, the minor diameter less, consequently the area is less, and again varying as the cosine of the angle between the axis of the lens and the oblique pencil. Indeed, the light would reach a vanishing point, while the length of the pencils would reach infinity in the hypothetical case of an aperture in an infinitely thin plate, and an angle of 180° . Thus we have \cos^3 .

APPARENT DISTORTION WITH OBLIQUE RAYS.

Again, we have the fact that, with oblique pencils, a symmetrical solid object, say a sphere, is not represented symmetrically, but disproportionately longer in the direction of the obliquity of the plate to the axis of the pencils; that is to say, in a direction, on the plate, radial to the axis of the lens as it cuts the plate; a certain given quantity of light has to cover a larger area than at axis, and the lighting is therefore dimmer. The relation is again the cosine, so that we have \cos^4 . These relations are slightly modified by the bending of the axes of the pencils of light as they pass the various surfaces of the lens, but there is very little error in stating that, apart from interference by the mount of the lens, and assuming the edge of the aperture of the stop to be sharp, the illumination given by oblique pencils of light varies as the fourth power of the angle between the axis of the lens and the path of the oblique pencil.

AN EXAMPLE—A PORTRAIT LENS.

To put this into a very practical form, let us take a few cases in common use, a 12 x 10 plate, or one of the same proportions being imagined.

For portraiture, it has long been recommended that the focal length in use, that is to say, the minor conjugate focus, should be twice the length of the plate used, which in this case would mean 24 inches. This would give the corners of the plate about three-quarters of the illumination of the center.

A CASE OF A RAPID LENS.

Taking now a "rapid" lens, as used for landscapes, about the commonest focal length of which is about 16 inches for our 12 x 10 plate, we shall find that we are getting at the corner of the plate only very little over half the light there is at the center. Going still further, and taking the "wide-angle landscape," with a focus of only the length of the plate, that is to say, a focus of 12 inches for a 12 x 10, we get a good deal less than one-third the light at the corners that there is at the center.

VERY WIDE ANGLES.

Now coming to an extremely wide angle, namely, one subtending an angle of 100° to the diagonal of the plate, the pencils untouched by the mount or the hood—and this is, in our experience, the widest angle included by any lens in practical use—the lighting of the corners is only

ONE-SIXTH OF THAT AT THE CENTER.

It will be seen that the falling off is great, if the lens be anything like a wide-angle one, and the figures given show one of the great advantages of long-focus lenses, namely, comparatively equal lighting over the plate. Of the two methods designed to overcome this falling off, the first consists in having a star-shaped disc revolving in front of the lens. It is evident that the oblique pencils are favored in comparison with the central, which latter will, indeed, not act at all, unless the circular center from which the radiations spread be smaller than the diameter of stop to be used. Moreover, the exact differences between these two diameters, and also the shape and length of the radiations, are difficult to calculate, so as to give illumination that is quite even. Still this device has been used in photographic surveying.

A SUGGESTED ONE.

The other method is to have one of the condensing lenses of a combination; that is to say, a lens thicker at the middle than at the edges, made of light yellow glass. At first sight this appears to be a very feasible proposal, but there are many difficulties in the way of practically producing a lens of this kind that will really give equal illumination. In the first place, it is very difficult to strike the right color, and there is no right color that will serve for different kinds of light, such as bright sunlight, rich in blue rays, and evening light, rich in yellow.

We are not aware that this lens has ever got beyond the suggestion stage, but some experimental lenses may have been made.

It seems possible that such lenses might be used with orthochromatic plates, instead of a color screen, but there is the difficulty that correction for illumination is not compatible with correction to help out orthochromatization. If the lens be made correct for even illumination and correct for orthochromatism at the center, it will be under-corrected for the orthochromatization of the oblique pencils. A compromise might certainly be made, but we doubt if any optician is likely to take up the manufacture of such lenses.

It need scarcely be said that either method, the star wheel or the yellow lens, greatly decreases the rapidity of the combination with ordinary plates.

A subject of great importance is yet to be considered, namely, the inequality of illumination caused by the cutting down of the pencils by the lens mount, or by the hood, and this especially in the case of the more rapid lenses.

The falling off of the illumination of lenses from the center is, in the older forms of rapid lenses, much greater than that described, because

with these lenses, used with full aperture or nearly full, a very small obliquity causes the lens mount to cut off, or intrude on, the pencil, which we have supposed so far to be bounded only by the edges of the diaphragm aperture.

Perhaps portrait lenses, especially those of a somewhat old type, with the distance between the lenses long in comparison to the diameters thereof, form as good an example of what we mean as any.

Let us take a case of such a lens, with a fixed aperture of the same diameter as that of the combinations, which are of equal diameter. More strictly the fixed aperture should be of the diameter of an axial pencil, as condensed by the front combination; that is to say, it should be a little smaller in diameter than the front lens.

HOW TO FIND THE TRUE APERTURE.

We may, as we are on the subject, give an easy method of finding out whether the fixed aperture is truly the equivalent aperture of the front combinations, passing all the light that passes this combination without being of unnecessarily large diameter. In the place of the diaphragm is placed a piece of ordinary sensitized paper. In the case of the Waterhouse diaphragm this may be done by making a stop of very stout sensitized paper—such as some of the gelatino-chloride papers—or in the case of a thin paper, by backing it with a thin cardboard. In the case of the iris diaphragm it is a little more difficult, but a fair approximation can be had by pasting the paper to the front face of the diaphragm ring or support. The lens is held for a minute or two, the axis pointing toward the sun. Of course, a dark circle is produced, with a diameter less than that of the lens. This is the correct diameter of the fixed stop.

INEQUALITY IN LENSES WITH LONG MOUNTS.

But to the lens again. With fixed aperture, the equivalent of the diameter of the front lens, if we fix this lens to the camera with the ground glass turned back, or even if we hold the lens in the hand, an eye at about the focal distance and in the axis of the lens—in other words, looking straight into the lens—will see an illuminated aperture that is perfectly circular. On swinging the lens, or moving the eye away from the axis of the lens, the edges at opposite sides of the circular aperture are cut down, or intruded on by the ends of the mount, till by degrees the aperture seen takes a form from which it can be seen at a glance that the falling off of light is enormous.

Such an appearance of aperture is reached by but slight obliquity of pencils with portrait lenses, and rapid rectilinears, etc., where lenses are long in proportion to their diameters. In such lenses it causes a much greater falling off than is effected by the cases already considered.

MODERN LENSES LARGELY FREE FROM THE EFFECT.

In the new forms of lenses with comparatively short mounts this cutting down of the pencil occurs to a far less extent. In wide-angle lenses in which the fixed stop is a good deal smaller than the diameters of the lenses, or, what is the same thing, when the rapid new lenses are stopped down to a maximum aperture, a good deal less than the diameter of the lenses, this change of form of aperture does not appear for some considerable angle, when the change occurs rapidly, with very small stops almost abruptly.

EVENNESS VARIES WITH THE STOP USED.

We have more than once wished to find out, for a particular lens, what angles could be included with different stops without the mounting of the lens interfering with the integrity of an oblique pencil, from which the size of plate that could be covered without interference with this integrity could easily be estimated.

HOW TO FIND THE PLATE EACH STOP EVENLY COVERS.

The method used was very simple, and, with all respect to Mr. Dallmeyer, we think simpler than one that he described some years ago, if we remember rightly.

For the ground glass a transparent sheet of patent plate was substituted; across this was pasted horizontally a strip of paper with its upper edge at the level of the axis of the lens, where a pencil mark was made. The lenses being of the type in which the fixed aperture was of the equivalent diameter of the front combination, this mark was an indication that the angle through which the lens could transmit pencils in their integrity was zero. A smaller stop was placed in the lens, and the eye was passed along the strip of paper till it was seen that the integrity of the pencil was just being interfered with by the lens mount. This observation was made both to the right and to the left, so as to avoid mistakes and get a mean, lest the glass were not at right angles with the axis of the lens. The process was repeated for all the stops of the lenses.

AN UNSUITABLE MOUNT A CAUSE.

The burnishing of the outer surfaces is what first begins to cut down the pencil with moderate angles, but, as the stops get smaller, and the angles become wider, the hood is often the cause of cutting down the pencils. If these are cut off by the hood before the burnishing of the posterior combination begins to perform the same function, the lens hood is either too long, or of too small a diameter for the lens, and we have had several lens hoods cut down on this account. If the length of the lens hood is just right, it will be found that, with a very small stop, the cutting down

of the pencil takes place simultaneously by the hood, the burnishing of the front lens, and of that of the back.

But there is an objection to the excessive shortness of hood thus involved when the lens has to be used for subjects involving only a narrow angle, as too much oblique light, not used to form the image, strikes the various surfaces of the lens, resulting in reflected and diffused light in the camera, which is liable to result in a veil of fog on the plate, especially if these surfaces are not scrupulously clean. An outer hood may be fixed to slide on the fixed hood, so that the length can be increased. We have tried this on one of the new lenses, which acts as a very rapid lens, with full aperture through a moderate angle, as a wide-angle lens with a small stop, and have found the sliding hood very useful, though it is but clumsily fitted.

A BIG HOOD FOR STUDIO WORK.

In studio work, where a camera is worked with only one lens and one size of plate, a permanent hood of great length and diameter is very useful. It should be of such diameter and length that the pencils are not cut down at the corners of the plate, or not much cut down, for it is to be observed that a moderate amount of cutting down—indeed, more than might be expected—shows no perceptible effect of inferior illumination toward the corners of the plate. An arrangement of the kind here indicated has long been advocated by Mr. W. E. Debenham. For the sake of lightness this hood may be made in the form of a truncated cone.

THE CASE OF SINGLE LENSES.

We have had in our eye only compound lenses so far, but all that we have written very nearly applies to single lenses, except that with these latter it is best to have an arrangement whereby the distance between the lens and diaphragm can be varied, according as a wide or narrow angle is to be included, as with the single lenses by Grubb.

WHEN AND HOW IT CAN BE CURED.

Finally, the falling off described in our former communication cannot be cured, or even ameliorated, except by troublesome or difficult processes. The falling off described in our present communication may be ameliorated (1) by shortness of mount, (2) by extra large diameters of lenses too expensive for rapid moderate angle lenses, and (3) by having the lens hood of the proper diameter and length, and by being careful that no part of the mount but the end of the hood, or the burnishing of the lenses at the extreme front, and the extreme back surfaces, cut into an oblique pencil of light with the smallest stop ever used in practice.—*Photography.*

Secco-Films—A Striking Innovation.

A COMPLETE and most exceptionally advantageous substitute for photographic dry plates and celluloid films has been patented in Germany, as well as in fourteen other countries, and is being introduced in this market by Messrs. Whitney, Graaff & Co., 39 Lombard street, London, E. C. These films are the result of eight years' systematic and patient work, and now, when ready to be brought before the public, are really of such exceptionally perfect quality that they will without doubt meet with a quick and general introduction. The greatest care has been taken to produce an article uniform and faultless in every respect, and before distribution of the new preparation many of the most noted and greatest experts were given sample packets and requested to pronounce their opinion as to whether the new films would meet all requirements. All the reports received speak with exceptional satisfaction of the great number of good qualities which this preparation possesses, and with astonishment at its simplicity.

The following are among the advantages of "Secco-Films": They are very cheap—about 25 per cent. cheaper than dry plates, and 50 per cent. cheaper than celluloid films. They are very light in weight. (Twelve glass plates 13 x 18 cm. weigh about 1,040 grammes. Twelve celluloid films 13 x 18 cm. weigh about 80 grammes; twelve "Secco-Films," 13 x 18 cm., weigh about 12 grammes.) They are very easy to manipulate, no new fittings, no new chemicals, no new baths being required. They are unbreakable and boxes are not necessary for packing. They are neither explosive nor combustible. They are very sensitive to light, more so than glass plates and celluloid films with similar emulsion, as no light is lost by passing through the support during exposure, this advantage having been pointed out by Captain Colson. They are very durable—more so than celluloid films. The finished negatives are unaffected by water. They are strong and not easily torn. They are very thin and therefore print quickly and can further be printed from either side without loss of sharpness; stripping plates for collotype and other photo-mechanical processes are thus absolutely unnecessary and in the carbon process double transfer is no longer an essential. "Secco-Films" show no halation when exposed against light. During drying they are also impervious to dust and the attacks of insects; a not unimportant point for tropical work. They are specially suitable for radiography, as on account of their transparency and cheapness several pictures can be taken at once. Again, if two films are exposed film to film and when dry the same are again superimposed, the image appears more distinct and

plainer. "Secco-Films" can be cut to any required size from larger sheets by anyone without trouble. The edges are not sharp and therefore do not cut the fingers. They may be used in *all* existing apparatus, including roll holders and daylight cartridge holders. They can be retouched very easily on both sides without the use of a retouching medium. They are also eminently well suited for the production of transparencies of all kinds, as they are unbreakable. They can be dried quickly by means of blotting paper and a little heat. They do not roll or curl up. They are not subject to electric appearances, marks, or spots. They are suitable for the production of enlarged negatives, which can then be printed on all sorts of paper.

"Secco-Films" can be treated exactly like any ordinary plate, with the exception that they require a preliminary bath, before development, of ten drops of glycerine to an ounce of water. They should be placed in this, film downwards, and allowed to remain until quite limp and then they can be developed with any ordinary developer, fixed and washed as usual; and if it is found necessary to intensify or reduce, they should be placed film upwards on an old negative glass and then treated with the reducer or intensifier. When the washing is complete, the film should be again soaked in the glycerine bath and the strengthening film also placed therein, the two films brought into contact, and gently squeegeed. It is important that strong pressure should not be used; it can be readily done with a piece of the cardboard in which the films are packed. It can then be pinned up by one corner or laid flat on a shelf to dry, and when absolutely dry the paper can be stripped from both sides, leaving the finished negative.

Words From the Watch-Tower.

BY WATCHMAN.

Some folk seem to think that some other folk have a big, very big swallow. A. T. Newton, in the *British Journal of Photography*, says "It may surprise many readers of the *British Journal of Photography* to learn that several of our best operators now only use a lime in high pressure work for a minute or two's duration, at the expiry of which a new cylinder is placed on the pin, the result being that *during one entertainment perhaps fifty limes are used*. I, for one, *am* surprised, and would be more so if I could believe it, which I do not. Somebody has been drawing Mr. Newton's leg.

* * *

Those who are interested in "records of rapidity" may be glad to know what is being done in that line in London. I learn from *Photography* that at the recent opening of the Jubilee Hospital in Woodford,

by the Duke and Duchess of Connaught, the royal party were photographed for the purpose of getting an enlargement, the profits on the sale of which were to be given to the funds of the charity. The photographer left the grounds with the exposed plate at 3:15, having a twenty minutes' distance to go to his laboratory, and returned with a beautiful enlargement, for copies of which many orders were given, at exactly 5 o'clock.

* * *

The tide is doubtless tending in the way of "Municipal Ownership," but I doubt whether many of the "City Fathers" will be disposed to go as far as is recommended by a writer in *Tid-Bits*, who seriously proposes that at every place of public resort the authorities should fit up dark rooms properly equipped for the use of photographers, who would willingly pay for their use at the rate of, say, four cents for each fifteen minutes.

* * *

ANOTHER NATURAL COLOR METHOD.—Berger & Co., of Southwark Park, London, have entered the color photography field, and promise a paper, to be manipulated just as an ordinary P. O. P. to the finish, but of such a nature that natural tints may be instantly developed on any desired part and in any desired shade; and that without having recourse to dyes, colors, pigments, or special apparatus or appliances. Something of this kind has been so often promised that I am not ashamed to confess to just a little scepticism, and a desire to see "Wee le see."

Our Portfolio.

[Prints sent for criticism—*not more than one at a time*—should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.* (during July and August to *Point o' Woods, N. Y.*), and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in THE AMERICAN AMATEUR PHOTOGRAPHER.]

481. W. E. COGSWELL—"Haying," although a somewhat hackneyed subject, is generally pleasantly suggestive of country life, but this conveys it in a sombre aspect. The arrangement is satisfactory, but the values are again altogether false, everything on which the light has not fallen direct being simply black. You must learn to practise the old, old rule, "expose for the shadows and let the lights take care of themselves"; or, in its improved form, "expose long enough to secure detail in the shadows, and, by development, take care of the lights."

482. C. G. MOORE—"The Greed of Gold," a miser seated beside his bags of gold, the contents of which he has been counting. He has evidently got through to about the half of the last when, hearing a noise, as if about to be interrupted, the half-filled bag is grasped by the right hand, while with the left he tries to cover the heap of coin still on the table. Our correspondent has aimed high and come near, very near, to success; but the model, hardly old enough for the full realization of the idea, has not altogether succeeded in assuming the necessary expression. De-

termination and strength of purpose are visible enough, but there should be both avarice and terror, and that to an extent only to be acquired by much training. See our frontispiece.

483. C. E. SODERSTROM.—“News From the War,” a woman in the act of churning, and a man reading a letter to her, probably from her son at the war, is fairly good, but might easily have been very much better. The attitude of the woman is stiff, and the anxious and interested expression that *should* have been in evidence is altogether absent. Then there is far too much bare foreground, and, worse still, because visible to any eye, the print has been trimmed, or left untrimmed, so as to place door-post and window cheeks, that should have been vertical, at a considerable angle. We have pleasure in helping our readers, but it takes up much precious time, and we expect them to send for criticism only such prints as they have done their best on, and such trimming or leaving untrimmed as this is unpardonable. It is all the more annoying, because with care it might have been a very fine picture.

484. O. B. WARREN.—“The Locomotive Engineer.” The trimming is satisfactory, what is not seen being well suggested, but the photography is very much at fault. The exposure has been so much too short that to get even the little detail in the few shadows development has been pushed till nearly everything, including the boiler, that is usually black, is simply white paper.

485. C. H. HAMILTON.—“Onward and Upward” is a well selected subject photographed at the right time, and while truer in values than nine-tenths of all that come, just wanted a little longer exposure to be altogether so. See page 323.

486. E. M. MILLER.—“In the Ozarks” is a grand, bold subject, that with sufficient exposure would have been a beautiful photograph with a fine cloudy sky. But a much too short exposure has resulted in nothing but white and black. Every shadow, and indeed everything on which direct light has not fallen, is as black as it could be at midnight, without a star in the heavens.

487. C. E. TINGLEY.—Every now and then some one discovers, or thinks he has discovered, that photographs are improved by being printed under a textile fabric, such as crape, gauze, etc., or other medium that will break it up into lines, and more than once the method has been patented; but, like other ephemera, it comes only to go and be forgotten.

Your four-inch head, when held far enough from the eye to blend the lines, is certainly beautiful and effective in its softness; but it would be equally so without the lines, as it is really a very fine photograph, and when examined closer—at the distance at which such pictures are generally seen—the lines are positively offensive. A fabric in which both strands and meshes were very much finer would “soften” equally well and be much less objectionable. The meshes are, in this, about forty to the inch. You will find twice that number much better.

488. E. A. DONNALLY.—“On the Quiet,” a group of boys on a “dyke” smoking cigarettes, has only one fault, but it is so serious and so glaring that the photograph should not have been sent. We are willing, nay, anxious to be helpful by our criticism; but surely you knew well enough that the stones of the “dyke,” and the legs and hats of the boys, and indeed everything else not directly lighted, were falsely represented by white paper. The exposure has been far too short. It is simply a waste of material to go about snapping on such subjects with such a lens. A negative so false in values is not worth printing from, and true values cannot be got without sufficient exposure.

480. J. F. WILLIAMS.—"On the Delaware" is a fine selection in which foreground, middle distance and beautiful cloudy sky each plays its important part and unites with the others to make a satisfactory whole. The one fault is the too common one, false values, caused by too short exposure and development with a solution too strong in reducer. Water that should be only in the shade is represented as nearly black, while part of the same sheet, on which direct light has fallen, is simply white, as are the upper parts of every stone on the beach. With a longer exposure this would have been a charming representation of "solitude." See page 327.

490. B. LESLIE VIFORD.—"Unknown Riches" is one of those photographs—a baby in a perambulator—that even if good are only interesting to the family, and this is not good. It lacks the essentials of a good photograph, light and shade, a dull gray, without contrast, or point of high light. Try again, get *some* sparkle into it, and don't block out one of the eyes of the dog by the knob in front of the carriage.

491. HAROLD A. RISING.—The flash-light portrait is not of any particular interest; not a very good example of "the usual thing"; that is, of ordinary third or fourth rate professional work. Its main fault is too flat lighting, from the flash being too much in front.

492. GEORGE P. LESTER.—"A Quiet Scene" is much better art than photography. It is a fine selection and a fine point of view, but wants something to break up the bare foreground. The fatal fault is false values; the road and the greater part of the sky are represented by white paper, while the shadows, indeed everything in shade, is equally black. Much too short exposure is the cause.

493. CHARLES C. ANGE.—The unnamed print is a good subject, but the arrangement is a little mechanical looking, the two sides of the stream too much alike, although not the same in size, and there is too much bare foreground. It should be trimmed to where the left bank begins. Then the exposure has been too short; a white sky and dead black trunks and branches are not to be tolerated now.

494. MISS K. J. KALBFUSCH.—"A Moonlight Scene" is a subject not interesting enough to be photographed in any light, and the exposure has been far too short. Here there is little more than a bare outline, while under proper conditions moonlight photographs may be as full of detail as those by daylight, and at best, such work is a waste of time.

495. W. M. GRIFFITH.—"Refreshing" is a beautiful woodland scene, through which runs a picturesque stream, in which cattle are cooling and refreshing. It is a fine subject, with one small and one serious fault. The objective point, the stream and cattle, should not have been pushed so near to the left margin, and the exposure has been so short as to give nothing but black where half-dark and even middle tint should have been. The only thing you need now is to know how to secure true values, and that can be done only by sufficient exposure. We have reproduced it, not because it is good, but to show how easy it would have been to make it so. See page 335.

496. C. E. LIVERS.—"Springtime" is a pretty bit of winding roadway with foliage-lined banks, but hardly interesting enough to be a picture. But it should have had a longer exposure. The road is much too white, and stems and branches are merely black lines. The black mount is a mistake, as it accentuates the all too much whiteness, both in the road and roadside. The clouds are too pronounced, as they cause the eye to wander from where it ought to rest.

497. W. W. NASH.—"Starved Rock" is a mistake (1) because the scale of the foreground dwarfs the rock, making it appear only a slight ridge; (2) because in-

stead of the rock being the most prominent feature it is much less so than the trees in the foreground and in the left distance; (3) because the sky is too dark and the water simply white paper. It should have been an upright, and included only the rock, or at least nothing that did not lead the eye to it, whereas everything here takes the eye from it.

498. N. P. BRIEL.—"Timberline Lake" is a topographical photograph in which, of course, there is nothing to criticise, except that the exposure has been much too short. The water is black, and the logs floating on it white paper.

499. MARIAN R. CASE.—"Casa Nuova." a recently uncovered house in Pompeii, is unfortunately only a snap shot, and consequently shows only blackness where detail would have been invaluable. It is almost a sin for those so favored by fortune as to be able to visit scenes and objects of such interest to be content with snapping and its resulting false values of simply white and black, when, by suitable exposure, they might be shown to their less favored brethren in all their beauty of detail. We are glad to see it, however, and shall reproduce it, in the hope that it will encourage others by longer exposures to do better.

500. E. S. WILSON.—The photograph of the child in a large hat borders too closely on the grotesque to be dealt with here, further than to say that a longer exposure would have given truer values.

501. N. E. ARNOLD.—"A Pastoral Scene" is a stereo print of a pretty subject, but you have not done it anything like justice. The cattle are eating white grass, the foliage is as if dusted with flour, and the sky simply white paper. The rage for rapidity seems to have smitten the whole fraternity, and exposures are only long enough to affect the films where bright light falls, the result being as in this case. To get anything at all in the slightly less lighted parts development is pushed till middle tints and half lights are quite opaque.

502. MRS. W. H. PHELPS.—"Not a Color." Presumably a couple of miners testing a sample of ore, is a very good photograph, almost a picture. Arrangement, expression and lighting are satisfactory, but a better background should have been chosen, or at least the parallel horizontal lines of the steps avoided by placing them at an angle. The upright form would have been much better than the oblong, as you would have avoided the useless matter on right and left, and got some necessary foreground between the foot of the sitting figure and the margin. You are on the right track, have got better values than most who send prints, and by a little longer exposure they would have been still better.

503. CHAS. F. HAGEMAN.—"Thinking," a figure sitting close to a window, apparently in deep thought, is a very satisfactory production. The obscurity of detail in all but what is lighted directly from the window is not, as you seem to think, a fault, but is what gives to the picture its charm, as it leads the eye directly to the objective point, the face of the figure. The exposure has been correct. We shall reproduce it. See Answers to Correspondents.

504. FRANK R. MILLER.—"The Perplexed Musician" is an effective example of the style selected for the frontispiece of our May number, and one in the production of which both artist and model have done their work well; indeed, we think better than in 372. The lighting has been so arranged as to concentrate attention on the face, with its truly puzzled expression, and the sheet in which the puzzling passage occurs, and while the values are not quite true, they are nearer so than most of such representations. The only improvement we can suggest would be the lowering the tone of the cornet. Reduced to a half-light it would be a better connecting link

between the two lights, the forehead and the music sheet. We shall have pleasure in reproducing it; but please don't fasten to ribbed mount again, as there is risk in removing it, and the ribbing would interfere with copying.

505. D. J. MACNAUGHTON.—"Plodding Homeward" is better in conception than in execution, as, from the short exposure, the values are false. The wide expanse of foreground, in this case not otherwise objectionable, is much too black and white. The unbroken horizontal sky-line is also a mistake, repeating, as it does, the upper and lower margin of the picture. As the interest centers in the figure and cart on the homeward journey after the labor of the day, the large vacant space on the right should have been avoided by giving the picture the upright rather than the horizontal form.

506.—C. D. ROULO.—"Among the Buttercups" is under exposed, simply black and white, and the child is stiffly posed, staring at the camera. She should have been left to her own sweet will, and caught when at her best. Such little pictures should be very much better focused than this is.

507. D. F. BARCLAY.—"At the Edge of the Swamp" is not a picturesque subject, and from this point of view, at least, not worth photographing. Even had it been good, it would have been spoiled by the prominence given to foreground objects and consequent dwarfing of the more distant, and especially by the under exposure and consequent blackness of everything except a few patches of light and the intolerable white paper sky.

508 G. H. DICKINSON.—"After the Storm." We cannot find a single good quality in this, not even a suggestion of a storm. The sky is a far from picturesque mass of white clouds on, presumably, a blue sky, but especially the upper region is simply black as at midnight without a star. The distance or sky-line is a strip of black foliage without a suggestion of detail, and the foreground, presumably intended to represent water, has no suggestion of that element. It is just such as might have been made by drawing a stiff brush charged with white across a black surface.

509. G. W. DUNBAR.—"Pines in Pineland" is an under printed print from an under exposed negative of a fairly good subject. It is so false in values as to represent the grassy banks of a stream as mostly white and the sky altogether so. You must try to represent things much more according to their luminosity, by giving longer exposure and printing deeper.

510. R. B. LAMSON.—"Spring Meadows" is not a fortunate selection and an unsatisfactory composition. The meadow occupies only an inch and a half of the five and a half in space, and is without a single object of interest or anything to vary its flat gray tone. The large clustered tree on the right has nothing to balance it, and from under exposure is, both trunk and branches, simply black paper, while the sky is from the same cause whiter than ever was natural sky. You should learn something of the laws of composition, and expose long enough to secure true values.

511. H. W. SCHONEWOLF.—"Moodna Creek" is a fine subject, and from probably the best point of view, but thoroughly marred by faulty photography. Under exposure has necessitated the pushing of development to such an extent that water and sky are simply white paper, and the shadows are darker than ever shadows were, in even the duller light. Try again; give at least twice or thrice the exposure, and just before exposing disturb the water by throwing something into it to destroy the reflections that are always objectionable.

512. H. BRYANT.—"On the Mexican Border" is too scattered to be interesting,

and what seems a village, and might have been the objective point, is on much too small a scale to be seen without a glass. You have tried to include far too much, and what you have got is far too flat, probably from over exposure. There is neither a light or half-light in the print, nothing but several shades of gray.

513. B. C. BROWN.—The portrait itself is very good, although somewhat stiff from the position of the arms, but the straight line of what seems to be a curtain at the side of the head is a mistake. The background is too dark; something like the part on the left would have been better. The lighting is satisfactory, but a lens of longer focus is needed to prevent the enlarged appearance of the knees.

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tloga Centre, N. Y. (during July and August to Point o' Woods, N. Y.), reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal]

THE CAMERADS.

This is the name by which the recently organized photographic section of the New York Knickerbocker Athletic Club will be known, and as athletics and photography are now so closely connected, the wonder is that it had not been formed long ago.

The first officers are: President, P. T. Austin; vice-president, Dr. W. J. Furness; treasurer, E. Wolkwitz, and secretary, J. H. Loscarn.

When the "Camerads" get into thorough working order we hope to now and then tell our readers something of their proceedings, and show them some of their work.

CALIFORNIA CAMERA CLUB.

Mr. J. W. Erwin, the popular president of this club, having been sent to Havana to assist in establishing the postal system there, received on his return a reception so enthusiastic as not to be forgotten for some time. It was the night of the ordinary monthly meeting, but the reading of the minutes was taken for granted, the ordinary business hurried through as quickly as possible, and the members resolved themselves into a happy family party and had a right pleasant evening. The club rooms were tastefully decorated with flowers and photographs. The entertainment included some excellent singing by Mrs. J. J. B. Argenti and Miss Louise Heppner, accompanied by Mr. W. F. Hooke; dialect stories by Captain William Leale; illustrations in the sign language by the talented mute, T. H. d'Estrella, and the whole wound up by an exhibition of the Timmins selected set of English slides.

Our Table.

"THE RIGHT ROAD TO PHOTOGRAPHY." A Course of Instruction in the Theory and Practice of the Art. By Dr. John Nicol. New York: G. Gennert. Price, cloth, \$1; paper, 75c.

It is needless to say that in writing this little book we have done the best that we could, for both its publisher and its readers; and that having been in close contact with photography since shortly after its introduction in 1839, and being acquainted with almost all that has been written on the subject, and even allowing for the fact that "every hen considers her own chickens the best," our opinion is entitled to some

weight when we say that it is the best book for the purpose that has as yet appeared. It contains 104 pages, divided into nineteen chapters, beginning with "Light, the Photographer's Pencil," and ending with "Clouds in Landscape."

While "The Right Road to Photography" is mainly intended for beginners, and includes all that is necessary to enable anyone of average ability to make photographs, not only of perfect technique, but that shall also have some claim to be pictures, it also contains some things that even the experienced photographer has not yet learned, but which he will be the better for knowing.

FROM MESSRS. B. FRENCH & Co. comes a revised price list of Darlot lenses, which is well worth the attention of all who are likely to be in the lens market. The Darlot lenses are too well known for us to say anything in their praise, and the fact that they are cheaper than the lenses of other first-class makers does not in any way imply that they are in any sense inferior to the best of them. A Darlot's hemispherical of 14-5 inches focus has been one of our favorite lenses for years, and we know that some of the best work of some of our best men has been done with Darlot's lenses.

Darlot's lantern objectives are well known all over the world, and are employed in preference to all others by the most popular lanternists in this and other countries, because of their flatness of field and other qualities. We are the fortunate possessor of one with which we have dozens of times filled a forty-foot screen with a three-inch picture, and so fine was the definition that the markings on the shells on the sand around the Great Pyramid were distinctly visible.

In addition to all necessary information about lenses, the list contains much other information, including a table of distances, that every lanternist ought to have, as it will often tell him just what he wants to know without going through a system of trial and error; and as it is to be got for the asking no one need be without it.

MITCHELL'S HYDRO-METOL POWDERS.—We have to thank the Standard Chemical Co., of Philadelphia, for a supply of these excellent developing powders, which we have tried and found all that can be desired. They are put up in hermetically sealed glass tubes, each sufficient for eight ounces of developer, dissolve freely in water, and, with anything like correct exposure, give ample density and a fine printing color.

While for some purposes there is no doubt that there is an advantage in developing with separate solutions, for hand camera work generally, and especially when on tour, single solutions, and with the material ready to hand in such tubes, good work can be as well done, and with far more convenience than in any other way. We may add that with one tube dissolved in four ounces of water we have developed velox paper to our entire satisfaction; and that the tourist may safely trust to the hydro-metol powder for any kind of developing that he may want to do.

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander Davis), Washington, D. C., from whom copies of patents may be had.]

E. T. CARNs, Portland, Oregon.

Magazine Camera. No. 625,379.

A slidable carrier is mounted in the camera box and is adapted to carry a series of plates. A flexible hood is secured to the carrier to permit of it being reciprocated

without exposing the plates. Mechanism is provided whereby as the carrier is drawn out the exposed plate will remain in the camera and be moved to the rear, so that when the carrier is again forced inward an unexposed plate will be brought into position.

CHARLES WHITNEY, Winnetka, Ill.

Film Rolls. Nos. 626,356 and 626,357.

These are light tight rolls formed by backing a film with an opaque material and forming ledges on the longitudinal edges of the backing strip, which when rolled up prevent the entrance of light between the coils of the roll at the ends thereof, and make it possible to omit the ends now employed on the ordinary film spool.

ULRICH NEHRING, New York City.

Burnisher. No. 626,535.

A hollow roller is journaled in a frame and is provided with a capped opening in one of its ends, through which heat retaining material may be introduced into the roller. A handle is formed on the frame.

EUSTACE E. WALLIS, Kettering, England.

Shutter. No. 627,027.

Two rollers are placed on opposite sides of the lens opening and an endless belt or ribbon which is wider than the lens opening is placed over these rollers, said belt being provided with two exposure apertures. Mechanism is provided for rotating the rollers to carry the belt back and forth in front of the lens opening, the parallel portions of the belt moving in opposite directions. The exposure apertures are so placed in the belt that they move in opposite directions across the lens opening, and when in line with said opening they register with each other and make an exposure.

J. G. BAKER, Philadelphia, Pa.

Print Holder. No. 627,069.

Comprises a block of rigid material having holes formed therein which are connected to an air-exhausting apparatus. Around each opening is a ring of yielding material to prevent the print sliding when held against the block by atmospheric pressure.

W. C. ROMANS, Freeport, O.

Display Device for Photographs. No. 627,355.

Two rollers are mounted in a box or casing and have a web removably attached at its ends thereto, which web is adapted to carry pictures or photographs and to be wound on one or the other roll. A transparent plate is fitted in the top of the box, and a suitable guide is provided to bring the web close to said plate and parallel therewith, so that by operating the rolls the pictures may be viewed through the glass plate.

F. SCHANY, Fort Wayne, Ind.

Light Stand. No. 628,286.

From a standard a gas pipe extends upward and is provided with a series of horizontal branch pipes which are provided with gas burners and stopcocks. Each burner is provided with a pivoted reflector and all the reflectors on each branch pipe are connected together and move in unison about their respective burners.

WILLIAM McDADÉ, Straight, Pa.

Printing Frame. No. 628,347.

An inflatable air bag is placed in the frame back of the paper and is inflated by means of a bulb pump which is connected to it by a flexible tube. The inflatable bag is provided with a blow-off valve to prevent a pressure sufficient to break the glass.

Answers to Correspondents.

[Correspondents are requested to notice that communications intended for the editors, from July 1st to September 15th, should be addressed to DR. JOHN NICOL, *Point o' Woods, N. Y.*, where he will, as usual, give instruction in the theory and practice of photography.

C. F. H.—The darkness in the print criticised as 503 is just as it should be, because the only light comes from the window, leaving the rest of the room in desirable darkness. The black shadows and too white lights of photographs of openly lighted subjects are the result of under exposure, and for such prints there is no remedy. Over-development of a properly exposed negative produces too great density, although, unless it has been very great, it only increases the time of printing. Over-exposure tends to flatness, the very opposite of the hard white and black.

H. H. SCHONEWOLF.—“Light-struck” corners on the negative may be improved by gently rubbing them with a tuft of cotton moistened with alcohol.

G. W. RITTMAN.—Although we are not a “patent attorney,” you may take our word for it that no valid patent can be granted for an auxiliary lens to be inserted between the front and back lenses of a combination for the purpose of shortening or lengthening the focus. The method has been in use for years, and was described and illustrated on page 89 of Taylor’s “Optics of Photography,” published by Macmillan & Co., New York, in 1892. The giving of an old lens, and for an old purpose, a new name, cannot entitle the giver to a patent for it.

C. F. MCCLENATHAN.—The only stereo shutter cheaper than the one you mention, with which we are acquainted, is the Thornton-Picard, and it answers the purpose admirably.

J. A. E. HOEFT.—Enlarging is too large a subject to be dealt with in this column, but we may say that we have never seen a “snap” negative that was worth enlarging. The negative should be full of delicate detail, which means an exposure fuller than can, generally at least, be got in hand camera work. You should consult some work on enlarging.

We cannot in this column recommend any particular lens, but you will find all your questions answered and all needful information in “Common Sense About Lenses,” in our December, 1898, number.

The exposure with ray filter is a question that you must settle by experiment. B. & L. say with ortho. plate four times, and with an ordinary plate thirty times as long as without it.

W. GILSON.—We cannot spare room for further discussion of what you call “The Question of Auxiliary Lenses.” There really is no question about the matter. The insertion of thin positive or negative lenses between the components of a compound or double lens, for the purpose of shortening or lengthening the focus, was recommended by Archer in the early fifties, and has been more or less in use ever since. Anyone is free to make them and sell them under whatever name he pleases. See answer to G. W. Rittman.

H. E. KINNEY.—See answer to W. Gilson and G. W. Rittman. A negative, concave, or dispersing lens inserted between the components of a doublet lengthens its focus, while a positive, convex, or converging lens shortens it. The “Frena Magnifiers” are probably negative lenses intended to lengthen the focus and so reproduce objects on a larger scale from a particular viewpoint than could be got with the lens without them. Underwood’s “Salon” and “Royal” cameras are fitted with both

classes of supplementary lenses. A supplementary positive of short enough focus to so shorten the lens of a hand or other form of camera as to admit of considerable enlargement without increasing the draw, differs only in degree from one of larger focus that only shortens the doublet a little. Our almost life-long friend, the late J. T. Taylor, did not "invent" the supplementary lens, but only, as a matter of convenience, mounted three or four of different focal lengths in a strip of brass that passed through slots cut in the lens mount; and W. H. Davies had previously shown before a meeting of the Edinburgh Photographic Society a similar arrangement of four, two positive and two negative. We understand that Williams, Brown & Earle, of Philadelphia, are agents for the Frena.

DR. W. J. FURNESS.—Your enclosure has been forwarded to Dr. Frederick, who will doubtless attend to it.

MATT CRAVEN.—It is contrary to rule to answer questions except through the columns of the magazine, and to properly reply to yours would occupy far more space than we can afford. You will find all the information you want in almost any of the handbooks, especially in "The Right Road to Photography," to be got from our publishers.

CARRY WILTON.—We cannot return your prints, as you omitted to enclose stamps for the postage.

G. R. BARRET.—We do not care to criticise eccentricities, especially when they verge so closely on the vulgar. They do not, as some seem to think, degrade photography; but what about the photographer?

E. C. G.—If you followed the directions closely we cannot suggest a cause of failure in "post fixing development." If the chemicals were pure the stock solution should not have had a "sedimentary deposit" in the bottle. Only the fixing need be done in the dark room. The pyro, bromide, and ammonia solutions should be 10 per cent., the latter, say, 1 drachm of the stronger solution, placed in a graduated measure and water added to 10 drachms. Notice also that the pyro should be preserved with potassium metabisulphite, say 30 grains of the latter to each 60 of the former; and that a very full exposure is necessary.

CHARLES C. AUGÉ.—The skies may be toned down to their natural value, or clouds printed in from a separate negative. See several articles on the subject in back numbers.

MRS. L. N. HOWE.—(1) In tank development the plates are not removed from the tank till completely washed after fixing, and if a sufficient number of changes of water, say eight or ten, have been employed to free them from every trace of the hypo the tank will be equally free, and ready for the development of another lot. Our method is, in making each change, to spread the left hand over the plates to prevent their slipping out and turn the tank bottom up. (2) We do not know the composition of the solution to which you refer, and cannot say how much it should be diluted, but you may try one part to ten of water. (3) For a two hours' period try 1 to 5 or 6. Why not employ the formula in the article to which you refer, or that in the "The Right Road to Photography?" They both give satisfactory results. (4) Snap shots and time exposures should not be developed together. We consider our time exposures sufficiently valuable to deserve each a separate development, and a development modified so as to be suitable to the subject, and to produce the effect that we desire. (5) The fixing solution may be 1 to 4, but we generally employ the "acid fixing solution," as given by Carbutt in his formulæ.

SALE AND EXCHANGE.

[This department is for the benefit of SUBSCRIBERS who have photographic material, apparatus or books which they wish to exchange, and such wants will be inserted free of charge one time. For each additional insertion we will charge one dollar per month. Dealers advertising in these columns will be charged double our ordinary advertising rates.]

For Sale or Exchange.—5x7 long focus Premo, fitted with 10½ inch focus rectilinear lens and B. & L. Diaphragm Shutter and one conoscope finder. Will exchange or sell in order to obtain a good anastigmat lens. C. H. Dickinson, Grand Rapids, Minn.

For Sale.—One ten-inch Model Duplex Burnisher, gas and oil heating. Cost \$12.50 new; will sell for \$9.00 cash, good as new. O. S. Liquin, Decorah, Ia.

For Sale.—A 5x7 Sunart Vici equipped with a B. & L. Diap. Shutter, and a fine B. & L. R. R. lens; three double holders and tripod; this outfit lists at \$54.50. Will sell for \$38.00; it is nearly new and in good condition. I will exchange the above outfit for a 8x10 Tel.

Poco, equipped with B. & L. Diap. Shutter, and good R. R. lens and pay difference. Address, A. B. Roane, Portsmouth, Va.

For Exchange.—A Wolff-American bicycle in first-class condition for its equivalent in value in photographic apparatus. Prefer exchange with one who can examine wheel. Daniel J. Dowdney, 163 W. 105th street, N. Y. City.

Wanted.—Second-hand camera, either No. 4 bull's-eye special, or No. 4 bullet special. Correspondence solicited. W. H. Cadwell, Nashua, N. H.

Wanted.—Some one to form a club of subscribers to this Journal. A Gundlach 5x7 camera with good lens given as premium. Write for particulars. Address THE AMERICAN AMATEUR PHOTOGRAPHER, 239 Fifth avenue, New York.

Wanted to Exchange.—Prints of scenery and human interest for ditto. Send descriptive list. W. B. Starr, Room 212, 5 Beekman street, New York.

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"WHO WOULD NOT BE INFIRM AND AGED TO BE CONSOLED LIKE ME!"

THE
AMERICAN AMATEUR PHOTOGRAPHER.

VOL. XI.

SEPTEMBER, 1899.

No. 9.

Improving the Negative.

BY JAMES ROSS.



"HOME PETS."

IN portrait photography, from time immemorial, retouching and otherwise working on the negative has been almost universal, and its legitimacy admitted by all but the few sticklers for what they call "photography pure and simple"; while landscape negatives have, with few exceptions, been printed just as they came from the drying rack, and the few who, for artistic or other reasons, sought to improve them characterized as dodgers, illegitimists, etc., and their work

sought to be excluded from the exhibitions.

Reduction and intensification, either over the whole, or local, and not always the latter, is still by many all that is considered legitimate, while there is hardly a negative that could not by one or other, or by a combination of several of the various methods of local treatment, be very much improved. Indeed I have no hesitation in saying that so long as photography is on its present basis, and plates of the ordinary description are employed, negatives that will give prints with true values and relative degrees of luminosity from all the objects included, cannot be produced by exposure and development alone.

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By C. W. Stevens.

"EVENTIDE."

Notwithstanding all that has been said, and much of it truthfully said, about the latitude in exposure and development, there is a normal exposure for each particular subject that will give by ordinary development the most truthful topographical representation of it, and by lengthening or shortening that the photographer may give to his representation such softness or broadness as he desires.

But in giving a slight under exposure, with a view to secure breadth, it is not unusual to get more than is desirable; sky, water, and even the highway, may become opaque before all desirable detail has been obtained, and he who sticks to photography pure and simple must be content with prints of the soot and whitewash variety.

It is not so with the man who sees in the negative only a means to an end, and considers *all* methods justifiable that tend to its improvement.

With Farmer's solution, as strong as it can be used without staining the film, or ammonium persulphate and a tuft of cotton, he rubs down the sky till it will print in something like correct tone and perhaps uncovers some clouds that appeared in the early stage only to be buried by continued development. The all too white water he treats in the same way, perchance making shadows if he knows just where they ought to be. Local reduction is a power the simplicity of which is only equalled by its

value, and both are such that no photographer of average ability, and anything like average taste, will, after giving it a few trials, ever again think a negative that has not been so treated worth printing from.

Nor is local intensification less valuable than local reduction. While it is true that desirable detail should, as far as possible, be secured through exposure, it is no less true that often subjects are of a nature to render a compromise necessary, and after photography has done all that it can, foregrounds may need lighting up, shadows require to get transparency, and distance be all the better for a little graying.

All this may be done by the ordinary methods; mercury, followed by a blackening solution, or better still by either of the single solution intensifiers, such as the recently introduced Agfa; but quite as well and on the whole easier, mechanically.

Some of the earlier published photographs, with the well known "J. V." in their corners, marvelous examples of technical excellence in the days of wet collodion, after being varnished were laid face down on a soft pad, and with another plate and fine emery and water, the backs finely ground. On this ground surface lead, both by pencil and stump, was



C. W. Stevens.

"SOLITUDE."

freely applied wherever needed, even to the extent of working in suitable cloud formations, with results that were charming, and that laid the foundation of one of the largest publishing trades in the world.

An equally satisfactory and less troublesome way is to cover the back of the negative with *papier mineral*. It should be cut so as to be about a quarter of an inch larger than the negative all the way round, dampened, the edges coated with a very adhesive paste, and turned over on the face, after which it will dry tight as a drum. This will take lead or color readily, and after a little practice, even those who are the least apt will be surprised at the ease with which they can effect vast improvements.

Unequally lighted subjects may have their lights adjusted so as to aid in producing the desired impression; shadows may be strengthened, lighted up, or even introduced; a too flat negative given contrast, or *vice versa*.

It is quite within the truth to say that the possibilities of improvement on the negative by these and other methods are limited only by the limitations of ability on the part of the photographer, and, as I have said before, those who have never tried it will be surprised by the ease with which very great improvements may be made.

Concerning our Portfolio.

NOTWITHSTANDING the many letters of commendation, and the numerous expressions of benefits received from "Our Portfolio," we are, month by month, becoming more and more impressed by the fact that the labor incident to it, and the space occupied by it, are altogether out of proportion to the good really done.

While our main object is to lead to the making of pictures rather than mere photographs, good photography must precede picture making. But far too little can be done for either, as about 75 per cent. of all the prints that now come for criticism are the results of thoughtless snap-shotting at subjects and under conditions beyond the limits of hand camera possibilities.

For some time an average of thirty prints, occupying about five pages, have been noticed each month, 75 per cent. of which were so palpably worthless that they should not have been sent.

It is true that work of a high order may be done with a suitable hand camera; but only by the experienced photographer who knows its limita-



"AN EXAMPLE OF PROFESSIONAL
PORTRAITURE."
BY
PHILLIPS.

tions, a knowledge that can only be gained by much practice with time exposures on the stand, and never by those whose only acquaintance with photography has been made with that instrument.

We grudge neither the time nor the space, but would rather give both to prints worthy of notice than waste them on purposeless under exposed rubbish. The effectual remedy would be to refuse altogether to notice hand camera work, but as that might exclude some that both author and critic would be the better for seeing we shall adopt a milder course, that will reach nearly the same goal.

Until further notice we shall continue to notice all that come—only one print from any one subscriber in one month, but to give time and space to those that show artistic effort or purpose, and the criticism of which shall benefit their authors; for all such as bear no such evidence, or are simply black and white from under exposure—and that will include 99 per cent. of modern snap-shot work—the number of print and name of author will be followed only by the letters W. P., for want of purpose, or thoughtless snap, and U. E. for under exposed.

We claim no particular merit for our criticism. It is at best, only the opinion of one man, influenced by his own particular taste, and of no more *authority* than that of tens of thousands of others who may in some degree differ from him. But to those of our readers who think they may be benefited by it we say: Send on your prints, but only those that are in your opinion your very best.

Don't send such as are, from under exposure or other cause, simply white and black, water and skies white paper, and everything on which direct light has not fallen equally black. Such faults are as evident to you as to us, and regarding all such we would say here, once for all, expose for the shadows and let the lights take care of themselves.

In conclusion, it should never be forgotten that a photograph that has not been the object of thoughtful care in its selection, lighting, exposure, development, and printing, is not likely to be worth either thought or care in its finished state.



A PRINT EXHIBITION, under the auspices of the New York Society of Amateur Photographers, will be held in the society's meeting room in the Jefferson Building, Brooklyn, on October 3. The exhibition is intended to "commemorate the first year of the society's founding," and readers of THE AMERICAN AMATEUR PHOTOGRAPHER resident in Greater New York and its surroundings are cordially invited to attend.

UNCLAS
SEP 8 1995



"SCRUB DAY."
BY
ANDREW EMERINE, JR.

No 242.



By Lee Moorehouse.

"SUNLIGHT AND SHADOW."

The Convention of the "P. A. of A."

THE Nineteenth Annual Convention of the Photographers' Association of America was held for the fourth time at Celoron, on Lake Chautauqua, from July 18 to 22, and although the attendance was not so large as on some previous occasions, the enthusiasm, social intercourse, entertainment, and actual practical work were far ahead of anything hitherto recorded.

Pleasure was amply provided for by excursions on the beautiful lake, a regulation "clambake," which, curiously enough, included blue fish, Irish and sweet potatoes, celery, crabs, lobsters, green corn and watermelons, in addition to hard and soft shell clams; a theatre party, and a grand ball; while for profit there were the daily demonstrations in the "School of Photography," under the auspices of the American Aristotype Company, lectures and criticisms by Professors Taft and Griffith, addresses on subjects connected with the craft by Messrs. Pirie MacDonald, C. M. Haynes, G. G. Rockwood, A. L. Bowerson, J. H. Schneider and H. Lancaster, and the educational influence of what may be called the trade exhibits, and the competitive work of the members. Those, on the whole, while still largely in the style of what is now known as "the usual thing," are decidedly in advance of previous exhibitions, both in the absence of eccentricities, often

not far removed from vulgarities, and in the presence of much evident effort after artistic excellence.

In reference to this desirable phase of the exhibits we cannot help expressing regret that the president, Mr. F. W. Guerin, in his inaugural address, seems to throw cold water on it. Referring to the, as yet, far too limited departure from stereotyped professional reproduction of fact, he says: "It is questionable to me if some of our prominent and esteemed members have progressed or taken a step backward. I am of the opinion our art is that of reproduction; to reproduce artistically, but to reproduce. If we overlook chemical effect, which is the one feature which individualizes our profession, it is my judgment that all of the art principles of this age, and of the old masters, will not save us from degenerating into cheap imitators of another profession, to the abandonment of our own, which should be equal in dignity and merit to any upon this earth."

Mr. Guerin has long been recognized as a leader in the West, but his leading in this instance, especially when contrasted with what is reported on another page as having been said about the same time, on the same subject, by the president of the British Convention, will, we think, be found to be in the wrong direction. That there may be no mistake about his position he adds, a little further on: "To make myself thoroughly plain, I will state two examples of photographic reproduction which we will as-



By W. B. Townsend.

ENTRANCE TO ARMY AND NAVY HOSPITAL, HOT SPRINGS, ARK.

sume are competitors in the same class, and I will then give you my idea of their respective ratings.

"My first example is a subject posed utterly regardless of art principles, the background and accessories inconsistent, but fine in definition, exquisite in detail, a reproduction of flesh and draperies in beautiful tone gradations, transparent shadows, and, in fact, masterful in chemical effect, but deficient in art principles as regards composition.

"My second example is the reverse of the first, a subject beautifully posed, composition fine, and faultless in art principles, but lacking in detail, blocked shadows, void of gradations, or, in fact, lacking in chemical photographic effect.

"As between these two examples, I should rate the first the higher, and should consider it so entitled for the reason that in chemical effect lies the science, skill and art of our profession, and the composition, while an essential and valuable adjunct, is secondary to it."

Is it any wonder that men who consider "chemical effect" and fine definition in a photograph of more importance than art principles and suitable accessories are characterized as tradesmen and laughed at when they claim to be artists?

With Mr. C. M. Hayes also we have a little fault to find. In an otherwise fairly interesting address he said: "During a recent visit to Washington and the Congressional Library, that grand monument to the heroes of art and literature, I saw the names of most of the famous authors, historians, novelists, poets, and men from every field of the art world; but nowhere in the great building was the name of Daguerre, the man who made this convention possible, the one to whom we must all look back for inspiration for the future. We should insist on having his name in the Congressional Library." It is very evident that Mr. Hayes has not read history aright. There are grave doubts as to whether Daguerre was the inventor of the process that bears his name; but be that as it may, there is no doubt at all that the photography of to-day and the photography of Daguerre are as wide as the poles asunder, or that Daguerre had as little to do with the convention possibilities as he had with the invention of the steam engine or the discovery of electricity. Not only did Talbot precede Daguerre, but the Daguerreotype has long been a lost art, or remembered only as among the things that were, while the photography of to-day is practically only a modification of the Talbotype, so that if any one man is to be honored as the father of photography and the maker of convention possibilities, that man is Talbot.

The Photographers' Association of America blundered when it erected



"A WOODLAND ROAD."
BY
MRS. MYRA ALBERT WIGGINS.

a monument to Daguerre. Let us hope that the recently appointed committee will take the advice of Mr. Rockwood, and look into history sufficiently to prevent a second blunder. In the meantime, there stands in the minute book of the association the following resolution:

"Resolved, That the science of photography should be represented in the Congressional Library at Washington by a tablet, or a bust of Daguerre; or in some fitting manner agreeable to the directors of that institution," about which we can only say that it will be more honored in the breach than in the observance.

As usual, the selection of the place of meeting for next year elicited considerable discussion, and ultimately Celoron, Put-in-Bay, Cincinnati and Milwaukee were put to the vote, the latter receiving a majority of the whole. The 1900 convention will therefore meet in the "Cream" City, under the presidency of the well-known and generally popular S. L. Stein, under the most favorable auspices.

One of the most attractive, if not the most attractive exhibits was the exhibit of the Nepera Chemical Company. On entering the building, the first thing that attracted one's attention was the beautiful display of prints made upon Velox paper, artistically framed, and hung against a tastefully decorated background of green velour. Some of the pictures exhibited included the work of many notable professional and amateur photographers, who have adopted this method of printing in preference to any other.

The Nepera Chemical Company have this year introduced three novelties. One is a machine, by means of which a large number of Velox prints can be made in a few hours. The machine consists of a small box about two feet long by a foot wide and a foot deep, and contains a roll of sensitized paper from two to three hundred feet long. The negative is placed in the lid of the box and the sensitized paper passes along beneath it. Once a correct exposure is obtained only two motions are necessary for each picture. A lever is drawn up which exposes the paper beneath the negative, and also registers itself on a small cyclometer. Another handle is turned, which causes to pass beneath the negative the strip of sensitized paper. With these two simple movements it is possible for the operator to turn out five or six thousand prints in a single day. As the exposure is in every case exactly the same, it is natural that one print is exactly like the other. The company exhibited the machine at work, and it attracted a great deal of attention. They also exhibited some long strips of photographs made by this machine, and the remarkable evenness was at once apparent. As a matter of fact, there is absolutely no waste at all.

Another novelty was the double weight special rough paper. The



"HERE COMES PAPA."
BY
CARL C. DISTLER.

No. 48c.

thickness of this paper is so great that the prints can be handled without fear of being torn or mutilated, and naturally require no mounting.

The third novelty referred to was a sensitized postal card. This is a postal card printed on one side with the usual lettering required by Act of Congress, and including a place for a one cent stamp. The other side was prepared with a Velox emulsion. The company exhibited two frames containing a collection of these printed postal cards, including some very choice little bits, taken from parts of negatives. Indeed, by skilful vignetting, it is possible to obtain a choice little bit from almost any negative in the possession of the amateur or professional photographer.

Taking it all in all, the nineteenth convention has been in every sense, and in all its phases, a very decided success, and we can only say that if the fraternity, as a whole, could really realize how much both of pleasure and profit is to be gained by attendance, not three small figures, but at least four large ones, would be required to record the numbers present at all future conventions.



The British Convention.

BY A CAMERAMAN.

THE fourteenth annual photographic convention of the United Kingdom was held in Gloucester from July 10 to 15, and was, as it has always been, a very decided success. Several members were in the ancient city as early as Saturday, more arrived on Sunday, and by Monday afternoon it was evident that the attendance would be fully up to the average.

The proceedings opened on Monday evening by a reception in the Guildhall, given by the civic authorities, headed by the mayor, in full official costume, and the interest excited by the convention was shown by the large and brilliant gathering of the citizens, which made the Gloucester meeting the most brilliant of its predecessors. Music and refreshments gave a tone to the reception, at the completion of which the whole assembly proceeded to the great hall, where the mayor, in a few well chosen words, welcomed the members to the interesting city, for which he was cordially thanked by Mr. Bothamley.

Mr. Bothamley then declared the convention opened, and in the absence of the retiring president, Mr. John Stuart, decorated Mr. Crooke, of Edinburgh, with the emblem of office. Mr. Crooke is recognized all over Great

Britain as at the very top of the photographic professional tree, and although he is more of a worker than a talker, his inaugural address contained much that was well worth remembering.

He began by congratulating the conventioners generally on the progress that had been made in the fourteen years of their existence as such, their numbers having increased from forty-six to almost as many as would be indicated by the addition of a cypher to those figures, touched on the proposed alteration in the copyright law, and thought that a law for the protection of the public from the far too common thoughtless, or perhaps worse, snap-shotter, was much more necessary.

In speaking of industrial photography he congratulated makers and manufacturers on the degree of perfection to which they had brought their products, rendering waste through faults almost a thing of the past, spoke highly of Cadett and Neall's "spectrum plate," which, when used with their color screen, was a revelation in landscape photography. Of printing papers, he said platinum was still, and probably long would be, largely in the lead for the highest class of work, but that Deko and Velox were of great value and largely used. The following, extracted from *The British Journal of Photography*, will give a better idea of the rest of his address than anything I could write. Speaking of pictorial photography, he said:

But, with all the facilities at our disposal, have we been utilizing them for the furtherance of the art side of photography, or "pictorial photography," as it is now called? On looking round our leading exhibitions, it is quite apparent to the most obtuse observer that the title "pictorial" applies more frequently to landscapes than to portraits.

A vast army of intelligent and artistic workers has brought its skill to bear upon the production of pictorial landscapes, and, being unfettered by the tastes or fancies of others, the results of its labors that adorn our exhibitions are worthy in every sense of being styled "works of art."

Of portraiture I cannot speak so encouragingly: for the past few years it has almost been threatened with extinction from our pictorial exhibitions. If we go back to the shows at the beginning of the eighties, we find the commercial portrait occupying the lion's share of space; but gradually matters have changed, and now the Royal Photographic Society is inclined to think the commercial, or technically perfect, portrait should receive more consideration at its hands than of late years. I am not sure that this type of portrait needs such kindly consideration. The producers of it have enjoyed the biggest share of public patronage, and had a good laugh up their sleeves at the expense of those struggling with pictorial work, while they have amassed great fortunes. I am of the belief that a change is approaching which will render this step on the part of the society un-

necessary. The spread of photographic knowledge tinged with artistic taste is such that only the work in which is embodied artistic treatment, combining the individuality of the subjects with the mode of expression peculiar to the author, will ever make our exhibitions interesting and educational.

As one interested in pictorial photography, I feel my mission here would be unfulfilled did I not refer more particularly to this branch. Modern photography requires to be executed on entirely different lines to those of former days, but it is to be feared that too many, through inability or carelessness, keep on in the old groove, ignoring the spread of knowledge and enlightened judgment now brought to bear on the results of their labors, and finding consequently a decrease in number of commissions and difficulty in getting the fees they demand. With reference to one cause of failure, is it not due to the striving after effect, the inborn anxiety to make something out of nothing, which results often in making nothing out of what might have been something, for we must remember that our art has its limits, which once passed, reveal its weakness? Let us rather endeavor to cultivate a taste for simplicity, repose, and dignity, depending little on those gorgeous accessories deemed indispensable by some.

I now address myself more directly to those who have, as it were, been standing by for years, looking on at the ordinary game played by the largest establishments in the world, and I hope to-night to instill into the hearts of these patient bystanders (who have been striving to bring about the desired advent) a lively belief in the assured future of pictorial portraiture. The *germ* of pictorial photography has not been dead all these years, but we must confess that it has been barely kept alive; the root, however, is still with us, and, granted a little nurture from a generous public, will spring forth into glorious life. There is a marked appreciation of high-class pictorial portraiture, and the men who can produce it will be sought after. The individual specialist himself must have so many qualifications that it is difficult to get them all combined in one individual, one being more successful with the gentler, another with the sterner sex, and yet another with children; in fact, a distinct aptitude for one of the three manifests itself. Be this as it may, portraiture should be a separate branch and the men who practise it artists; then the status of the photographer will rise, and the work that is devoid of artistic merit must in due course be assigned to the mechanical section at our exhibitions.

Might I crave the indulgence of those present who are not interested in this particular, while I presume to suggest what I consider the most suitable method of handling our environments at this turn of the tide? As a

man is judged by the company he keeps, so may he also be judged by his surroundings. This impression starts at the very entrance door; if this is vulgar, you may look in vain for refinement within. If specimens of work be exhibited here, let quality, not quantity, be the motto, and this feeling should govern the whole establishment.

The present-day tendency is towards too much display, giving a commercial aspect which is not at all desirable or necessary; we want to see more of the æsthetic element asserting itself. My ideal photographer's "shop" is a private house with closed door. This, you argue, precludes our being heard of; but are we not privileged to affix our name to each individual effort? Not like my tailor who made this exquisitely fitting suit, and who is debarred from printing his name on the tails. You have your advertisement free of charge, and, there being always some congenial souls on the outlook for artistic work, they will find their way to your bell handle.

Here let me make a suggestion to opticians who have been at work so long calculating optically perfect lenses for the profession. One welcome addition for portratists would be a lens for studio work that would in some respects resemble the Bergheim in diffusion of focus (too much diffusion would be undesirable), but having sufficient depth to enable focusing to be done roughly, say, by measurement, in the studio, similar to that practised in outdoor snap-shotting. This would rectify the absurd method of making a focusing stock of your model. To talk of diffusion of focus is tantamount to waving the proverbial red rag. However, as a middleman, it is not inconsistent for me to wave it, as it might be on the part of some of my extremist brethren.

At the conclusion of the president's address the room was darkened, and with Messrs. R. R. Beard and E. J. Wall at the lantern, and Mr. H. Snowden Ward as lecturer, a delightful exhibition of photography in colors was given, including slides by the methods of Ives, Jolly, Lippmann, Lumière, etc., Mr. Ward taking the place of Mr. Child Bayley, who had broken one of his legs by a fall from a bicycle almost at the door of the Guildhall.

The exhibition of photographs, apparatus, and material, is on a larger scale than usual, and includes some excellent work by the Platinum and Kodak companies; fine specimens of Velox; prints from negatives on Sandell plates, Secco films, etc., a fine display of work by local photographers, and almost all the more recently introduced cameras and lenses by the best makers.

The arrangements, as usual, included daily excursions, which were well attended, and at which the stand camera was more in evidence than at

several of the recent meetings; evening reading of papers, which were not so well attended; the usual general and committee meetings, at which Newcastle-on-Tyne was selected for the 1900 convention, and Mr. Thomas Bedding, of the *British Journal*, as president; and the usual dinner and group, the latter photographed by Mr. Pitcher.

Taking it all in all, the Gloucester convention was a very decided success, and will not soon be forgotten by any of those who had the good fortune to be present.

The American Institute Photographic Salon.

THE Photographical Section of the American Institute will hold its annual exhibition of selected photographs in the new gallery of the Institute, 19 West Forty-fourth street, New York, from November 27 to December 18, inclusive.

The Committee of Selection, of which there are eight members, include such well-known amateurs as Rudolph Eickemeyer and E. Lee Ferguson, and they will accept only such photographs as show some degree of artistic feeling and give evidence of motive in selection and treatment.

Not more than ten photographs may be submitted by one exhibitor, and they must be separately mounted and framed, with only the title and name of author on the front, and they must be delivered, carriage paid, and addressed to Dr. J. W. Bartlett, Photographic Section American Institute, not later than November 14.

There will be no entrance fee, and no awards of any kind, the honor of admission to the Salon being, as usual, a sufficient distinction, but each exhibitor whose pictures are accepted will receive a finely executed certificate.

Entry forms and all necessary information may be obtained on application to Dr. Bartlett, at the above address, or to H. Snowden Ward, 6 Farringdon avenue, London, E. C., England.

We need hardly say that for the honor of our magazine, and as an encouragement in our work, we hope to see the work of many of our readers on the walls of the Salon.

The besetting sin of those who use the camera as a plaything is under exposure, and that of those who aim at picture making, the employment of lenses of too short focus.

The Stereo-Chromoscope.

BY THEODORE BROWN.

THE means hitherto devised for the exhibition of stereoscopic relief to an audience have been clever and to some extent practical, but every thoughtful optician will admit that the ideal exhibition has yet to be realized. It is a difficult problem, and he who first solves this puzzle

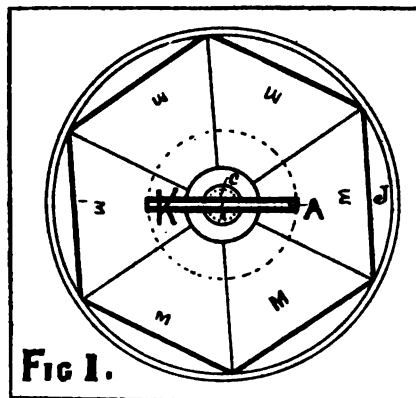


Fig 1.

brings to himself a fortune as its reward. Meanwhile, however, let us be content to know that many minds are working along this avenue, and it may be that a secret student has nearly reached the goal. Let us therefore encourage every slight improvement and new development pointing in that direction.

I do not claim that the following is any great advance in this branch of optical sciences, but as it may prove of some interest to the

student of binocular vision I will give a brief description of an apparatus which I have termed the "Stereo-Chromoscope." The device is based on the principle of alternate exhibition of two dissimilar images, printed in the two colored tints appealing to the green and the red-sensitive fibrils of the retina.

Fig. 1 shows a plan of the apparatus. Within a circular box, J, a number of reflectors are fitted, at such an angle as to reflect light, and to equally illuminate the picture to be examined. The two dissimilar images are printed as already specified, and mounted back to back on one and the same card. It is then placed in a groove made in the holder, K (see Figs. 1 and 2.) This holder is permanently fixed to a perpendicular spindle, C, which is caused to revolve vertically by suitable mechanical means, either by hand, spring or electrical power.

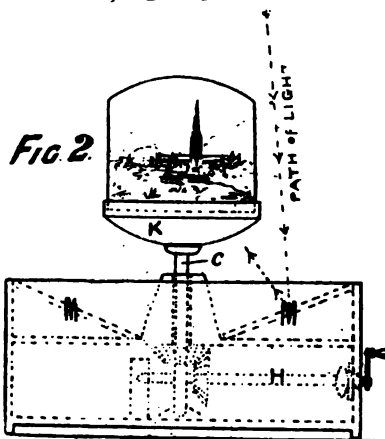
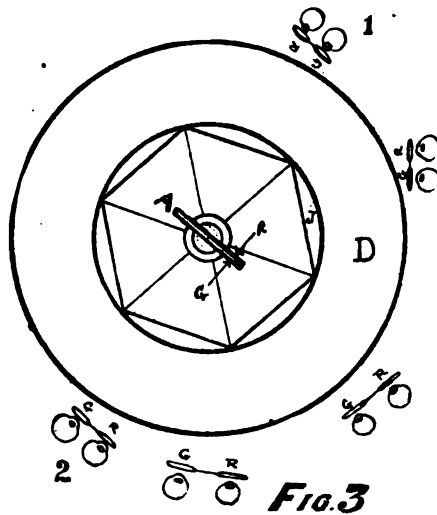


Fig 2.

Theodore Brown's
Stereo-Chromoscope.

Having a number of slides prepared in the manner already indicated, together with a number of spectacles fitted with colored glasses corresponding in tint to this picture, a very interesting exhibition may be given to a number of persons, each being able to view one and the same picture at the same time.

Referring to Fig. 3, the apparatus is placed in the center of a round table, D, around which the spectators sit, viewing from all sides the



stereo-chromograph placed in the revolving holder, A. The effect produced is that of a model standing out in bold stereoscopic relief, placed on an apparently circular stand. One of the greatest advantages gained by the use of such a contrivance is that any size picture may be used, but I should suggest cabinet size as the most suitable for drawing room entertainments.

Unlike the small refracting stereoscope, wherein the point of vision is limited to an area of about $2\frac{3}{4}$ inches by $3\frac{1}{4}$ inches, when the stereo-chromoscope is

employed the range of sight is practically unlimited, and although pictures measuring a foot square may be shown, every point over the whole area will be seen in stereoscopic relief, the two dissimilar images always correctly registering the various images at their respective places, corresponding to the dissimilar images of one object, as received upon the retina of the human eye.

It is important to note that the colored screens fitted to the eye-glasses interposed should not only match exactly the different tints of the two images constituting the stereoscopic slide, but also that they should correspond as regards right and left—i. e., if the picture taken from the right-hand point of view has been printed in the red tint, the screen before the right eye of the observer must be red. And if the picture taken from the left-hand point of view has been printed in the green tint the screen before the left eye must likewise be green, and *vice versa*.

Of course either tint may be presented to either eye, so long as this rule is observed throughout, but the operator who has decided to make a number of slides should be careful to stick to one color either for the right or left-hand image, otherwise he must anticipate confusion during exhibition. Too much stress cannot be laid on these points, as herein lies the principle of the whole construction of the stereo-chromoscope.—*Optician*.

The Contribution Box.

PRINTING IN CLOUDS ON VELOX PAPER.

AS I have never seen directions for printing in clouds on Velox paper, and as I have often been asked how I do it, I send my method to the Contribution Box.

I print from the cloud negative, first covering the landscape portion of the paper with cardboard, which is kept in rapid motion over a space of a quarter of an inch or so, to prevent a hard line of demarkation, while the frame is being exposed to the light. The landscape is printed in the same way, by covering the sky and moving the card.

C. H. WILKINS.

[The skies of the examples sent are very good, and without indication of having been printed from separate negatives.—EDS.]

PICTURES WITH "SPECTACLE EYES."

Some time ago I wrote you about how I lengthened the focus of my lens by the introduction between the lenses of a spectacle eye, and now I want to tell of my success in picture making with another "eye."

My plates are 5 by 7, and keeping in mind your recommendation of a lens "twice the length of the longest way of the plate," I got from the optician mentioned in my former letter one of 14 inches, a concavo-convex, sometimes, I think, called a "periscopic," untrimmed and about an inch and a half in diameter. This was fitted into the back of the mount of my rectilinear, the front and back lenses being removed, and in case of disturbance from the roughly chipped edges, a narrow line of black varnish was painted all round. By measurement the $f/16$ stop of the rectilinear was found to be about $f/30$ of the eye, and that was employed in taking the picture that accompanies this.

My first and indeed only difficulty was the focusing. I knew that the chemical and visual foci would not be on the same plane, but not just what the distance between them would be, nor whether the latter would be nearer or further from the plate. A few experiments, which would have been fewer if I had known more of optics, however, showed that the best results were obtained by, after getting a good visual focus, bringing the plate and lens nearer together to the extent of about seven-sixteenths of an inch.

With that arrangement I have made many exposures and got several, what I consider very fair pictures, one of the best of which I enclose,

along with one taken at the same time and from the same point with the rectilinear and supplementary lens, as described in my last. They are pretty much alike, but on the whole I think the spectacle eye has the advantage.

G. R. STRUTHERS.

[Our correspondent is right; the "eye" print is very decidedly the better of the two, although the superiority is contributed to, to a certain extent, by more careful development.

The chemical and visual foci of some of the earlier photographic lenses were not coincident, and we remember seeing the difficulty got over by the employment of a kind of gauge, consisting of two laths pivoted together like a pair of scissors, and at a point that the shorter ends were separated just, we think, 1-32 of the distance between the longer ends. In practice, after focusing, the longer ends were adjusted to the distance between lens and plate, and the camera back turned in to the extent of the distance between the shorter ends.—EDS.]

Adurol.

A NEW PHOTOGRAPHIC DEVELOPER.

(Communicated)

UNDER the name of "Adurol" the firms of J. Hauff & Co., G.m.b., H. & E. Schering, Berlin, have introduced a new developing agent which, in spite of the many developers that have been discovered and introduced during the present year, will create considerable interest even in the most conservative circles.

Adurol does not knock at our door as a total stranger, whom we hesitate to admit before we have carefully studied him and examined his claims on our time and attention. On the contrary, Adurol comes as a good old friend whose shortcomings in the past we have been acquainted with for years, but who, transformed by his new attire, gives us promises of improved services and sturdy friendship.

Adurol is the chlorine or bromine substitution product of the long and favorably known developer hydroquinon. Its highly remarkable active developing properties (which neither past practice nor theory could foreshadow) were simultaneously discovered by the above named firms, who subsequently decided to go hand in hand in the sale of Adurol, obtaining patents in all important countries, and furnishing the new developer through their regular authorized agents.

As regards the peculiar qualities of Adurol, we may say for short that all of the advantages of hydroquinon are not only preserved, but in a

marked degree increased, while the disadvantages of the latter are entirely overcome.

The drawbacks of hydroquinon are well known; they are, first, the necessity of using an excessive amount of alkali (usually carbonate of potash) in order to obtain its maximum developing energy; secondly, the time required, especially in cold weather, for the photographic image to appear completely, and finally, the great sensitiveness of hydroquinon to changes of temperature, the surprising diminution of its developing power in cold weather being such that it is almost impossible to use it in winter without the addition of metol. Experience shows that hydroquinon at low temperature fails to bring out detail and produces contrast and harsh negatives.

Now in considering Adurol we do not find these drawbacks. Very little alkali is required, carbonate of soda can be used in place of potash; the picture appears quickly, development proceeds rapidly, and it is remarkable and gratifying that the temperature in no manner influences the development. In addition, Adurol has vastly greater developing power and produces greater density than hydroquinon. Adurol should not be classified with rapid developers in view of the above statement, as it does not rightfully belong to that class. The correctly timed image appears in about twenty seconds, builds up gradually, and is complete as to detail and intensity in about four minutes. It will be seen that the progress of development is normal and gradual. The details having come out quickly, the intensity is not restricted to the high lights, but as development proceeds gradually the middle lights and all details receive their full share, so as to produce a harmonious negative of medium softness.

It follows that Adurol will permit shorter exposures than hydroquinon, and will be preferred to the latter for all studio and instantaneous work, and even where hydroquinon would ordinarily be chosen for the production of hard, contrasty negatives, Adurol by simple addition of bromide or use of old solution will give fully equal results.

Bromide of potash is an excellent restrainer for Adurol, but larger quantities are required than with hydroquinon. This is an advantage, since Adurol, being less sensitive to bromide, retains its power of development longer and can be used for a larger number of negatives than hydroquinon. This property of Adurol is indeed a remarkable one, and will not escape the attention of anyone experimenting with it.

The keeping qualities of Adurol are equally surprising, both in combined or in separate solutions. Thus a solution of Adurol prepared June 17, 1898, is at this writing, after the lapse of a whole year, perfectly clear and as energetic as ever.

Adurol, as discovered by Hauff, is the chlorine substitution product; as discovered by Schering, the bromine substitution product of hydroquinon, and they have been found practically identical in their action.

The chlorine substitution product is a white granular crystalline powder, more easily soluble in water than hydroquinon and should be used as follows:

I. ADUROL-POTASH.

A	{ Adurol.....	25 parts
	{ Sodium sulphite.....	200 parts
	{ Water.....	1500 parts
B	{ Carbonate potash.....	100 parts
	{ Bromide of potash.....	8½ parts
	{ Water.....	1000 parts

ADUROL-SODA.

A	{ Adurol.....	25 parts
	{ Sulphite soda crystals.....	200 parts
	{ Water.....	1500 parts
B	{ Carbonate soda crystals.....	350 parts
	{ Bromide potash.....	2½ parts
	{ Water.....	1000 parts

The bromide is necessary only with very rapid plates which incline to fog.

For studio work, 3 ounces "A," 2 ounces "B."

For landscape and snap shots, 3 ounces "A," 2 ounces "B," 2 ounces water.

ONE SOLUTION DEVELOPER.

Adurol.....	25 parts
Sulphite soda crystals.....	200 parts
Carbonate potash.....	100 parts
Bromide potash.....	2½ parts
Water.....	300 parts

For studio work 1 ounce developer, 5 ounces water.

For landscape and snap shots, ½ ounce developer to 4 ounces water.

The picture will appear in twenty seconds, and development is completed in four to five minutes. For very much under exposed plates more water may be added; for over exposed plates use bromide of potassium; for greater contrast increase the amount of carbonate potash. For bromide paper take 2 parts "A," 2 parts "B," 5 parts water, or of one solution developer use ½ ounce developer to 8 ounces water; no bromide is necessary.

[We shall take an early opportunity of putting Adurol to the test of considerable practical use, and have pleasure in giving our readers the results of our experience.—EDS.]

Words from the Watch Tower

BY WATCHMAN.

W. M. MILLER, the Standard Dry Plate Co.'s expert, voices the opinion of all who know anything worth knowing about photography when he says: "It is a matter of regret to all manufacturers that so many persons rely upon 'snap shot' work instead of time exposures on the tripod. Why persons should risk so much to obtain so little, is a wonder that cannot be explained." Surely the button pressing fraternity will take it seriously to heart when even the plate makers, the only ones that are at all benefited by their waste of material, are complaining of that waste.

* * *

Much has been written about the abuse or the misuse of the hand camera, but as bad as some of us are on this side we have not got quite so low as at least one man on the other. I learn from the *British Journal* that at a recent lecture in the meeting room of the Society of Arts, London, which was illustrated by a series of original diagrams in the shape of lantern projections, the click of a shutter was heard from some place in the auditorium. An examination revealed the fact that a *gentleman* (?) had brought a hand camera by which, by supporting it on the bench before him and giving time exposures, he hoped to secure copies of the diagrams without the lecturer's consent. There *are* those who would call this "clever," but there are others, and I hope very many of them, who have another name for it.

* * *

It is to be hoped that the outside world will not take F. W. Guerin, of St. Louis, president of the Photographers' Association of America, as, so far as photography is concerned, in any sense a representative man, or that the professional photographers of America endorse his opinions as to the relative value of art and so-called "chemical effect" in photographic portraiture, or it will think that we are even worse than we are, without hope or even desire for improvement.

In his address at the late Celoron convention he is reported as having said that "chemical effect" is the one feature that individualizes photography. With it, professional photography is equal in dignity and merit to any profession on earth; while without it, all the art principles of this age and of the old masters cannot save it from degenerating into cheap imitation of another profession. By "chemical effect" he tells us he means fine

definition, exquisite detail, representation of flesh and draperies in beautiful tone gradation; photographic technique in fact, and so that he openly declares that all else, including composition and all that the artists of the ages have taught us, are only secondary!

Sad to say, the president of the P. A. of A. is not alone in his opinion. The walls of the exhibition and even some of the reproductions in some of the journals show that he has some followers; but unless I knew that they were getting fewer and fewer I should tremble for the fate of professional photography.

Portraiture by Acetylene.

A PAPER on the above subject was given in a recent number of the *Deutsche Photographen Zeitung* which may be of interest to some of our readers, and we have therefore abstracted the same, with its illustrations.

The burners used are shown in Figs. 1 and 2, from which it will be seen that they are distinctly novel—or, at least, we should say they are so to us. They consume 80 litres of acetylene per hour, and give a very even light of 120 Hefner candle power. The arrangement of the studio is shown in Fig. 3. The sitter is placed in front of the background *g*. One side of the sitter is lighted by seventeen flames in two places—*a* with ten lights, and *b* with seven lights. The light is diffused by tracing paper screens *c*, and behind the lights are two reflectors of white paper, *d* and *f* in Fig. 3.

In the ground plan, Fig. 4, the position of two other reflectors is also shown. The shadow side is also lightened by the reflector *f*, Fig. 3, and by five lights *c*, Fig. 3, this light also being diffused by a tracing paper screen, which is omitted from Fig. 3, but is shown in Fig. 4.

These arrangements may be altered, of course, to suit individual cases, but it would be quite possible to use the same arrangement for flash or magnesium light.

WE hear that an American optical firm is about to place on the market a lens of the anastigmat type, with a working aperture of $f/4$, sixteen times faster than those in most of the hand cameras that are at present in use, so that we may get an instrument by which it is possible to get true values.

PORTRAITURE BY ACETYLENE

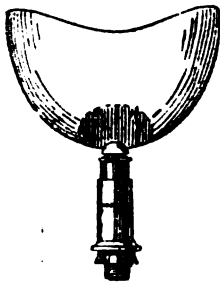


FIG. 1.

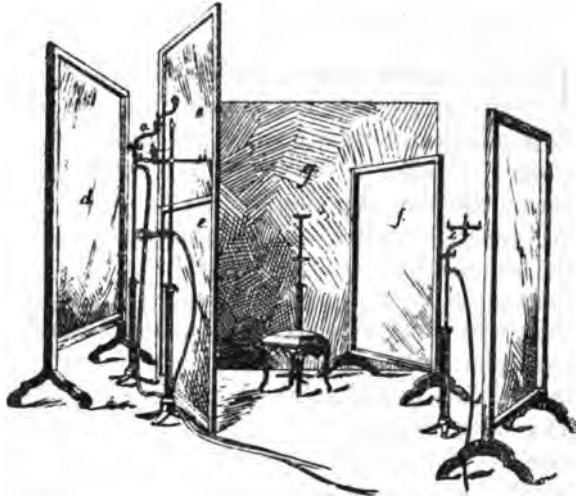


FIG. 3.

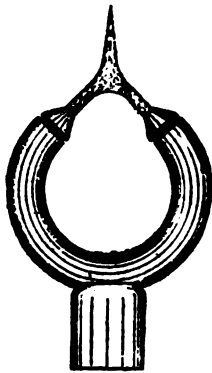


FIG. 2.

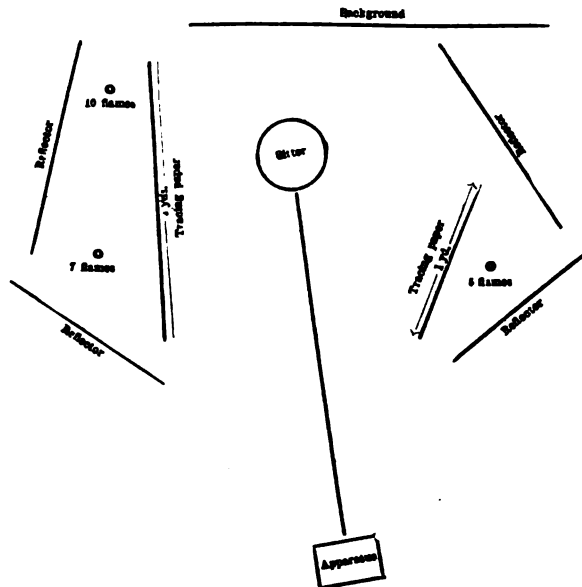


FIG. 4

Some Fundamental Points Concerning Development.

READ BEFORE THE BRITISH CONVENTION BY C. H. BOTHAMLEY.

IN a preliminary paper on "Development," read before the convention last year, I gave an abstract of the position of the question at that time, and in particular pointed out that the definition of a perfect negative given by Hurter & Driffield could not be accepted, because, in the first place, experienced photographers are aware that a negative that gives the best possible results with one printing process does not necessarily give the best possible result with every other process; and, in the second place, the assumption that a perfect negative must in its different parts transmit quantities of light reflected from those portions of the object that the particular parts represent involves a further assumption that the effect on the printing paper is directly proportional to the amount of light acting. This latter assumption probably holds good, within certain limits, in the case of enlarging on bromide paper, or in other printing processes in which the action of light causes no appreciable change in color. It does not, however, hold good, and, on the face of it, could not be expected to hold good, in direct-printing processes where the action of the light at once begins to alter the absorption coefficient and other properties of the sensitive material.

In order to make clear the object of the, unfortunately, comparatively few experiments that I am now in a position to describe, it is necessary to recapitulate a little ancient photographic history. Until the publication of Hurter & Driffield's first paper, photographers generally held the belief that it is possible to modify the general character of a negative, especially the gradations, by altering the mode of development and the composition of the developer, and thus, to some extent, to compensate for errors in exposure and more particularly for over-exposure. This belief had gradually been developed as a result of the observations and experience of a large number of photographers, who for many years had made experiments and recorded their results, although in most cases they had not, it is true, tried to express their results in very definite figures. Now, I, for one, must confess to holding somewhat strongly the view that, when certain general conclusions have been arrived at as the accumulated experience of the practical workers in any branch of applied science or art, any contrary conclusions that may be deduced from the results of laboratory experiments should be examined very critically before being enunciated, and should be enunciated with considerable reserve.

In their first paper Hurter & Driffield arrived at two main results as

the outcome of that part of their work that dealt with development. The first was that the character of a negative is determined by exposure, and not by development, and that the ratios of the densities or opacities is not affected by the mode of development. The second was that the ratio of the opacities remains the same at each stage of development, and that the only control that the photographer is able to exert on the printing quality of a negative lies in the length of time during which development is allowed to continue.

At the time of the last convention a second and lengthy paper, communicated by Hurter & Driffield to the Royal Photographic Society, was in process of publication, and everyone who has read this paper will recognize that it materially changes the position in which the matter was left by their first paper.

The most important result in the second paper is that Hurter & Driffield, while they still regard exposure and not development as the main factor in determining the character of a negative, and while they regard the constancy of the density ratios as the fundamental point in quantitative photography, nevertheless, as the result of their later experiments, arrive at the conclusion "that, if all possible variations in concentration and in composition of developing solutions are to be taken into consideration, the density ratios of the visible image cannot be said to be constant."

They describe in detail, with diagrams and numerical results, experiments on the influence of variations in the proportions of pyro-gallol, sodium carbonate, and potassium bromide respectively in the ordinary pyro-soda developer, on what they term the "inertia" of the plate. The practical significance of saying that the inertia is increased is that the result is the same as if the plate had been a slower one or had received less exposure. Conversely, if it is said that the inertia is reduced, the meaning is that the resulting negative is the same as it would have been if the plate had been a quicker one or had received more exposure. To put it in another way, to increase the apparent inertia of the plate by modifying the developer is practically the same thing as correcting over-exposure, while to reduce the apparent inertia of the plate in the same sort of way is the same thing as correcting under-exposure.

Now, Hurter & Driffield find that, by increasing the proportion of pyro-gallol, the sodium carbonate remaining constant, the inertia can be increased more than twice, or, from the practical point of view, more than twice the proper exposure can be corrected in this way. The effect of increasing the pyro is higher when the proportion of sodium carbonate is low (25 parts of the crystallized carbonate in 1,000) than when it is high (100 parts of the crystallized carbonate in 1,000 of developer).

They also find that, by increasing the proportion of potassium bromide up to 8 parts in 1,000 in the ferrous-oxalate developer, the inertia of the plates can be increased as much as thirteen times, or in the pyro-soda developer as much as eleven times; or, stating it practically, that more than ten times the proper exposure can be corrected by this means alone.

They state, it is true, that these differences disappear if the development of the plate is allowed to reach its limit; that is, is allowed to go on until the whole of the effect of light has been developed out, and are apparent only when development is stopped before this limit is reached. It is obvious, however, that, when a photographer is endeavoring to correct for over-exposure, his object is to prevent the whole of the light effect from being developed, and to stop development before the limit is reached is therefore exactly what he is aiming at.

Further, Hurter & Driffield find that an increase in the proportion of sodium carbonate reduces the inertia of the plate; that is, corrects for under-exposure, but the effect is relatively smaller than the effect in the opposite direction of increasing the proportion of pyro-gallol or potassium bromide. In other words, the power of correcting for under-exposure is considerably less than that of correcting for over-exposure.

It will be seen at once that Hurter & Driffield's second paper may fairly be said to bring us back to where we were before, and to afford numerical justification for the older beliefs of practical photographers. It is impossible to avoid feeling regret that their earlier somewhat sweeping conclusions as to the absence of any control during development for errors of exposures should have been enunciated at all until their investigations had covered a wider range of variations in the composition of the developer. Even as it is, their second paper does not entirely cover the limits within which a photographer has power to make variations, and does, in fact, make variations in extreme cases.

Since Hurter & Driffield, so far as control in development is concerned, to a large extent contradict their first paper, and bring us back very much to the old conditions, it might seem that there was nothing further to be done. However, as the old beliefs have been disturbed, and various questions have been raised, it seems very desirable that the same field of observation and experiment should be traversed by some other observer.

There is also another consideration which, from the practical point of view, seems to me to be very important. In their second paper Hurter & Driffield state that the error of speed determinations by the methods described in their first paper may be as much as 25 or 30 per

cent. Some years ago, in the course of the discussion on a paper of mine at the Royal Photographic Society, two of the most experienced photographers then living stated that they did not think it was possible to recognize in the negative and resulting print a difference of 25 per cent. in the exposure under ordinary working conditions.

From the practical point of view, differences that cannot be recognized by careful inspection may fairly be regarded as of little importance; from a scientific point of view they may be very significant.

From the practical point of view it seems to me to be sufficient to adopt a method of working that does not require a photometer, and is in other respects comparatively simple. All that is needed is a scale composed of bands of graduated opacities, such as may be produced by the old method of exposing different strips of one and the same plate for different lengths of time, and then developing it. This scale is then used for subsequent experiments, plates being exposed behind it in the ordinary way. After exposure the exposed plate is cut into two or four strips, and each strip is developed in a different way. In order to compare the fixed and dried strips they are simply placed together in their original positions, and examined against a sheet of white paper or other uniformly illuminated surface. If no differences can be detected in this way, or if the differences seem to be merely differences in general opacity, the strips should next be put into a printing frame, with a sheet of some chosen printing paper behind, and in this way a direct comparison of their printing quality can be made.

With regard to the point at which development should be stopped, in the case of the negatives ordinary working conditions should be imitated as far as possible, and therefore, in most of the experiments to which I shall refer the plan adopted was to stop development as soon as a given strip of the scale, representing shadow detail, had become distinctly visible.

In the case of prints, we may stop either when two successive bands on the scale, representing shadow detail, have become equally dark, or when a certain band at the other end of the scale, representing high-light detail, just becomes visible.

Operating in this way, it is comparatively easy to demonstrate that the general belief as to the effects of altering the proportions of pyrogallol and of alkali respectively is correct, and that Hurter & Driffeld's conclusions on these points are also correct. In the case of bromide, it is quite easy to demonstrate the marked effect on the negative, and with a new developer, Adurol, it is even easier than with pyro. It is also not difficult to demonstrate the marked differences between the negatives

produced by pyro-gallol and metol respectively, especially in the early stages of development, and also to demonstrate the equally important fact that these differences tend to disappear when development is allowed to proceed to its limit.

The present position consequently may be briefly stated as follows: With a given exposure, a photographer has control over the character of his negative in two ways; firstly, by varying the proportions of the constituents of his developer in accordance with the general belief resulting from accumulated experience; and, secondly, by selecting his developer, the results with metol and pyro-gallol, for example, being markedly different.

Another point to which I have given some attention is that investigated by Mr. Watkins, namely, whether there is a constant ratio between the time required for development and that which elapses between the pouring of the developer over the plate and the first appearance of the image. The experiments are not yet complete, but, so far as I have gone at present, I am able to confirm Mr. Watkins' main conclusions within certain rather important limits. Where the exposure has been fairly accurate, or where we are dealing with line subjects or similar classes of work, the method seems to have very considerable utility. Where, however, there has been any considerable excess of exposure, my experiments up to the present lead me to the conclusion that the old method of inspection of the negative during development is the only safe one, and that development by time passes beyond its proper limits. So far as detail in the shadows is concerned, the different negatives do not show any marked difference when the developing factor is employed, but I find that at the other end of the scale there is a marked loss of detail in the high lights, the different bands of the scale tending to become indistinguishable from one another in all cases where the exposure has not been so great as to bring about incipient reversal.

At present I am inclined to the view that it is impracticable to reduce development to a matter of figures; the operator must watch the progress of the process if he wants to get particular results. Development, in fact, is an art.

THE phase of photography indicated by "Kodak" and "Snap Shot" is merely a pastime, and they who practise it are photographers only in the sense that they who make translucent tracings are draughtsmen.

Notes.

BLUE PRINTS.—We have several times called attention to the fact that, contrary to the general belief, founded on the statement in the hand books, blue printing solution ready for use may be kept mixed for any length of time, and now the Germans have gone one better. According to a writer in *Photographische Correspondenz*, freshly prepared solutions of ammonium ferro citrate and potassium ferrid-cyanide, used half an hour after preparation, gave a paper showing perceptible grain and a tinge of gray. The prints were hard and not suitable for half-tone subjects. After keeping the separate solutions for a day, the paper showed no grain and was of a pure yellow color. This was also the case even when the solutions had been kept for weeks. The paper was likewise three times more sensitive and gave pure whites and good half-tones. The appearance of the prints made with solutions which had been kept was far superior and more delicate than of those made with fresh solutions. The same salts and paper were used in each case, and the prints were made immediately the paper was dry.

A NEW FIXING SALT.—The Messrs. Lumière have placed on the market an "acid anhydrous sodium hyposulphite," which is said to have at least double the fixing power of the ordinary hyposulphite, dissolves immediately, does not discolor, even when negatives are placed in it without previous washing, and prevents frilling by its hardening influence on the gelatine. They recommend an 8 per cent. solution, say, 1 to 12½.

REVERSED NEGATIVES.—At a recent meeting of the North Middlesex Photographic Society, Mr. J. McIntosh demonstrated the ease with which reversed negatives may be obtained by the aid of ammonium persulphate.

The method of procedure was briefly thus: A dry plate is placed in contact with the negative of which a reverse is required, and exposed about twice as much as if a good transparency was desired. The development is carried on until the image is right through the back, rinsed, and placed in a 5 per cent. solution of persulphate of ammonia until the metallic silver is completely removed. It is then placed in a solution of sulphite of soda for a few seconds to free it from the persulphate, and the bromide of silver remaining on the plate is reduced by development as in the first operation. It is then safer to immerse in hypo to remove any traces of bromide unreduced, as it would change in the light. All the operations after the first development may be conducted in daylight. This method would appear, if properly carried out, to give a better and truer

rendering of the gradations of the reproduced negative than either the method of stripping the film and transferring, or by excessive exposure of a dry plate, to secure reversal, *i. e.*, a negative from a negative.

PRINTING WITHOUT INK.—Frieese-Greene is a name well known, at least to British photographers, as an inventor with always something on the stocks. His latest and probably most important invention, or rather practical application of an old one, is a method of printing without ink, and only a pressman can know just how much that means. The work can be done with ordinary type on an ordinary press, deprived of all that makes presswork troublesome, ink, ink ducts, rollers, palette knives, rags, "turps," etc., etc., so that both press and pressman may be as free from smudge as the bookkeeper. Speaking of it, *The Amateur Photographer* says: We have seen the system at work on the premises of the Electrical Inkless Printing Syndicate, at Coldharbor Lane, Brixton, and can testify that the thing is perfectly genuine, and not of the nature of the Keeley motor and some other things that have been brought out within recent years.

The syndicate above mentioned claims that Mr. Frieese-Greene's process represents the dawn of a new era, and that printing can be accomplished in an ordinary press which has been shorn of its ink, ink ducts, rollers, palette knives, rags, turps, and all other accessories. The printing office of the future is to be as clean as a linendraper's shop, and editors and others who have to haunt such places will no longer be mistaken for sweeps as they wend their way homeward after their day's toil. The method can be applied to any existing press after it has been cleared of its obsolete gear, by the simple application of two wires from the street main, or from any other source of electricity, one wire being attached to the type in its chase, and the other to a metallic surface upon which the paper rests. The paper is impregnated with a certain chemical salt, the exact nature of which is kept a secret, and this salt is added to the paper during the process of its manufacture, without extra cost or trouble. It is anticipated that, in the near future, paper manufacturers will make this addition to their pulp as a matter of course, so that the product of their mills can be used for ordinary printing or for Mr. Greene's process. At the moment when the type surface presses upon this prepared and damped paper, an electrical current is made to pass between type and the plate beneath the paper, with the result that the chemical substance with which the latter has been treated is decomposed, and gives a strong stain as clean and sharp as that made by ordinary printing ink, but without its grease and stickiness.

For a long time inventors have been on the track of an inkless printing process, and, as a matter of fact, something of the kind was done half a century ago. In any old encyclopædia an account can be found of Bain's electro-chemical telegraph, in which the record of a message was made at the receiving station by means of a metallic stylus, which pressed upon a traveling ribbon of paper and made a mark whenever the current passed. If we remember rightly, the paper was soaked in a solution of nitrate of manganese; but it is obvious that other chemicals would bring about the same result, different substances affording different tints. We remember, too, a calico printing method which also depended upon electro-chemical decomposition, so that, in principle, the inkless method is not new; but every credit is due to Mr. Friese-Greene for his clever adaptation of it to modern requirements. The chief use of the new method will be for the rougher kinds of work. For fine printing of the best kind, ink will no doubt still hold its own for many a long day.

THE GOERZ LENSES and new binoculars are so rapidly becoming universal favorites that it has been found necessary to again enlarge the factory in Germany, and open a new branch office in Holborn Circus, one of the busiest thoroughfares in London.

THE KINEMATOGRAPH is disappointing those who were pessimistic enough to predict for it a short life, and is being more and more turned to practical account.

Londoners, and doubtless before long, Americans also, may see the Oberammergau Passion Play by its aid, without the trouble and expense of going to Bavaria. The Sultan is said to wish to see the working of some 800 miles of the Anatolian Railway, and for that purpose has ordered it kinematographed, regardless of cost, for exhibition in the Imperial Theatre at Yildes Kiosk, and more interesting still, if true, it is said to be employed at the Kiel University to show students the various stages of surgical operations, from the first incision to the last bandage. As to the practicability of this we have our doubts, as even the usually well lighted operating theatre is hardly sufficiently so for that purpose, and few operations of importance could be included on several dozens of fifty foot films.

AMMONIUM PERSULPHATE.—In reducing by this salt it is known that the best way to stop the action as soon as the desired result has been reached is to immerse the plate in a solution of sodium sulphite; but it does not seem to be so well known that re-fixing in hypo is also required. Unless that be done the reduced negative is apt, or rather certain, to become discolored by exposure to light.

Our Portfolio.

[Prints sent for criticism *not more than one at a time*—should be addressed to DR. JOHN NICOL, *Tioga Centre, N. Y.* (during July and August to *Point o' Woods, N. Y.*), and will be returned only on request, accompanied by stamps for return postage; and, unless otherwise advised, we shall consider ourselves at liberty to reproduce any of them in THE AMERICAN AMATEUR PHOTOGRAPHER.]

514. J. B. PARDOE.—“The Road House” looks like a snap-shot at a subject that needed a pretty long time exposure. It is simply white and black; a waste of material.

515. JOHN HANNA.—“Expectancy,” a negro child and a cat, is good as far as it goes, and would have been better of a longer exposure, so as to tone down the white. The figures are too small in comparison with the door, a fault that would be cured by trimming to about $3\frac{1}{4} \times 2\frac{3}{4}$.

516. E. S. WILSON.—“A Summer Day” is a fine subject not fortunate in composition. It is the “lopsided” variety, common enough, but rarely satisfactory, and in this one *feels* a want of something on the left to support the heavy mass of foliage on the right, something to take away the effect of the wedge shape beginning at the top and bottom corners on the right, and ending a little above the horizon on the left. Two children and a dog at play with a toy boat is the *motif*, but the effect might have been better had the children been larger, and less of the entourage included. The great fault, however, is the false values. Under exposure has resulted in perfectly black shadows, and reproduced leaves and grassy bank as simply white.

517. D. J. DOWDNEY.—“Cuts No Ice” is apparently an ice cutting and storing establishment on the banks of a pond or lake, a fairly good subject from the best point of view. The arrangement is in every way satisfactory, but the photography is sadly at fault. Under exposure has resulted in simple blackness of everything on which direct light has not fallen, and that to such an extent as must be patent to yourself.

518. MRS. THEO. SINGSTACK.—“November” is not a very picturesque subject, although so far as selection is concerned the best has been made of it. A lens of longer focus would have given a better rendering, a less exaggerated foreground, and a better idea of distance. The exposure has been too short, resulting in far too dark shadows. There is really nothing to suggest “November sad and drear” but the bare branches.

519. THOMAS C. THATCHER.—“Fairy Dell” is a good subject, but should have been taken from more to right or left. It is too equally divided or balanced. It is very much under exposed, and has been much too long in the toning bath. The negative is not nearly dense enough to give a good print.

520. F. P. STREEPER.—“A Portrait,” while, on the whole, equal to the average of professional work, might have been much better. The first impression is that it is too sombre for the sunny nature indicated by the expression, a result due partly to the too hard lighting, but more to a too short exposure and consequent deep black shadows. The pose is stiff, wanting in spontaneity, showing that art rather than nature placed the figure so, and the lack of atmosphere makes it stick too close to the background. The ornamentation on the shoulders and breast, especially the oft repeated parallel lines, have a distracting effect, and, willy nilly, keep drawing the eye from the merry face. The dark, plain background should have been shaded;

lighter behind the dark side of the face, and the light so arranged as to give some idea of the distance between it and the figure.

521. E. C. GATES.—"Chickie, Chickie." This is a little gem that comes like a refreshing breeze among such a lot of wretched under exposed and carelessly selected snap-shots that we are doomed to examine. Two little chickens feeding on a narrow board walk, a child interestedly watching them, and that is all; all that the eye cares to see, and the surroundings are so subdued that not only do they not attract attention, but actually serve to lead and fix the eye on the pretty group. Here we have almost all the essentials of a picture, including more than fairly good values, and delicate light and shade on a white dress. The one fault is the straight horizontal line, the edge of the board walk, across the foreground, repeating offensively the marginal line of the print. This should have run at an angle. We should like to reproduce it, but it is so small that we must see what the engraver has to say.

522. E. D. STILES.—"I See Me!" A child in her nightdress, blowing bubbles, is photographed in the act of having discovered her reflection on the surface of the bubble. It misses being a great success by one very serious fault, under exposure. The whole arrangement, including the expression of the little model, is admirable, but the white dress is as structureless as a lump of chalk, and what should have been transparent shadow is utterly black. A longer exposure would have made this a little gem.

523. W. F. PURDY.—The unnamed print is simply worthless from under exposure. Sky and water are white paper, while the tree on the right is perfectly black. You must learn to expose properly before you can make prints worth noticing.

524. E. C. DYMOND.—"Stoning Cherries" is a poor, yellowish print from a fairly good although under exposed negative. The subject is hardly of sufficient interest to be worth photographing. You should be content with single figures unless you can get the group more evenly lighted, as the left figure is simply black and white. Study some work on composition and lighting and you will do better.

524. H. C. D.—"Pansy for Thought," a girl looking at a pansy, is excellent in pose and expression; indeed, could not be better, but the background is *too* ugly and distracting to be tolerable. The exposure has also been too short. Such subjects should be developed with a solution weak in reducer, so as to get detail in the white dress, which here is simply a broad expanse of white paper.

525. ALICE BARTLETT.—The unnamed print, a winding road, with a large tree on the left, is very much under exposed, so much so that in development you have had to push till road, sky, and indeed everything on which light fell, was white, and even then the shadows are quite black. Twice as long would not have been too much for this.

526. W. B. SHAW.—"Comrades" is pretty near "how *not* to do it." Two girls standing, about as stiff as stiff can be, grinning into the camera, may be amusing, but the result is not pictorial. You had an opportunity, with such excellent models, of making a picture, but it required much more careful thought and purpose than there is here evidence of. The photography is good enough, but you will not know how to make the best use of it till you know more about composition and lighting.

527. C. H. WILKINS.—"A Breezy Day." In this the art is excellent, the photography bad, and the fault is simply under exposure. The tree, the shady side of the waves, and everything on which direct light does not fall, is black as black can be. The exposure should have been two or three times as long. "The Willows"

are, if possible, even worse, and from the same cause. You should take the good old advice: "Expose for the shadows and let the lights take care of themselves."

528. PRIMUS.—For the unnamed print we have nothing but praise. From apparently unpromising material, a flat, almost treeless stretch of country, with a winding stream, you have, by good composition, suitable lighting, and practically true values, made a very pretty little picture, worth 10,000 of the average snap-shots, the result of the present hand camera craze. You should turn your attention to larger work.

529. M. S. LORD.—"Curiosity," a group of three girls, two of which are examining something in the hand of the third, is well arranged and lighted, and the pose and expression of the youngest is perfect. We should have had pleasure in reproducing it but for the fatal fault of two of the heads being in contact with the upper margin of the picture, although it may be made an initial. Your work is too good to be wasted on such trifling sizes. Get a larger camera, and finish your pictures yourself. The want of a dark room is no excuse. Exposure is only a part of the work, and until you both develop and print, you are sailing under false colors every time you show a photograph.

530. H. K. BULL.—"A Bit of the Housatonic" is a very beautiful "bit," in which selection, lighting and point of view could hardly have been improved. The river in the foreground, beautifully broken up by the foliage on the right, the larger trees and sloping bank, balanced and contrasted by the water kissed masses on the left, and the indication of atmosphere between the distant hills, all work together to make a fine composition. The one fatal fault is false values; a sky of perfectly white paper, water almost as white, and foliage on the lighted side as if dusted with chalk, while the shadows are without a trace of detail. The exposure has been so short that, to get even half-dark development has been pushed till lights and half-lights are perfectly opaque. Twice as long would not have been too much. The buried clouds may easily be recovered by local reduction.

531. DR. W. J. FURNESS.—"The Squatter's Home" is one of the few pictures that are refreshing and encouraging among the mass of under exposed rubbish that comes to "Our Portfolio," and yet it differs from a good deal of it only in having got sufficient exposure. A humble dwelling, with attendant outbuildings, surrounded by more or less dense foliage, has been photographed so as to suggest the close of the day, and only needed a suitable figure trudging home after the labors of the day to make the suggestion complete. Selection and lighting are admirable, and we shall reproduce it with regret that in the process much of its charm will be lost.

532. CHARLES A. ZEIGLER.—"Just Above the Dawn" is a very good photograph of an utterly uninteresting subject; at least from this particular point of view. It is apparently a pool, with some broken branches and bits of sticks in the foreground, and a row of trees at the back, but it is altogether meaningless, and suggests neither "dawn" nor anything else. Study selection in picture making, or some work on composition. Your photography is good enough for picture making, but you have much to learn about art.

533. ORIN J. NOORIS.—"Duck Hunting" is a well selected subject with less of the too common fault, false tonality, than usual, but still false, that part of the water not in the shade, and a large part of the sky, being simply white paper. A little consideration would have shown you that never were sky, water or branches and even parts of trunks, so white as you have rendered them. The remedy is longer exposure. You do so well that you should not be content till you can

do better; better to the extent at least of true values, and the rendering of objects in something like their apparent degrees of luminosity.

534. FRANK S. DOBBINS.—"Rowland's Old Mill" has some good qualities, and might easily have had many more. It is a good subject, from a fairly good point, and although still far from true in values, is nearer so than nine-tenths of all that come to the Portfolio. A very decided improvement would have been the raising of the lens so as to have excluded about an inch and a half of the foreground and added that to the sky, and at the same time got rid of the objectionable reflection of the building. The mill-wheel should not have been cut in half; the exposure should have been long enough to give *some* detail in what are simply black shadows, and *some* indication of atmosphere should have been in evidence, instead of the distance being as well defined as the immediate foreground. In short, it is a fairly good technical photograph of what might have been a fine picture if the lens had been higher, the camera turned a few inches to the right, a much larger stop employed and a longer exposure given. We do not mean a longer exposure with the larger stop, but an exposure relatively longer, long enough to give true values. We shall reproduce it as an object lesson.

535. JAMES A. KILTON.—"A Mining Superintendent" has no apparent connection with any kind of a mine, but is simply a sharply focused figure stiffly posed in front of a door in a wooden building. The exposure has evidently been made by a snap in sunlight, and everything on which direct light has not fallen is simply black. This belongs to the great body of snap-shot work that is amusing enough to the snappers and pleasing to those who are snapped, but which from want of thought and much too short exposures, is only playing with photography, and not worth serious consideration.

536. H. F. HELMBOLDT.—"On Charles River" is a beautiful subject, and with a little longer exposure would have been a fine photograph, but the point of view is very objectionable. A foreground of water, with a boat at the opposite side, but the bank of the river is an absolutely straight horizontal line, repeating exactly the lower margin of the print in a way fatal to pictorial effect. Such a view must never be taken from straight across the river; always at an angle. With longer exposure your photography would be perfect, but you have no knowledge of art.

537. J. A. BOURQUIN.—The selection is excellent, the point of view satisfactory, but the exposure was much too short. Put the camera on a stand and give sufficient exposure, and you will do well.

538. Miss M. R. CASE.—"Distaff Spinning in Sorrento" is an interesting subject, very well arranged, but the exposure has been too short, and the negative not sufficiently developed. It might be intensified with advantage. You should develop your own work; you cannot expect that anyone else will take the necessary care to make the very best of an under exposed plate. In spite of its two faults we shall have pleasure in reproducing it.

539. HENRY D. ALLISON.—"A Leisure Moment," a portrait with architectural surroundings, is, in composition, lighting, and other features most excellent, the one serious fault being false, very false values from under exposure. An exposure of twice as long would have made it very much better. We shall reproduce it.

540. D. H. TOMB.—"The Road to the River" is a subject that might have been made interesting, but not photographed in this way. We presume the carriage coming from the river was intended to be the objective point, but from under exposure it is black as night, while the river behind is simply white paper, and the

lights, instead of being concentrated, are scattered all over. You will not make photographs worth looking at till you learn to expose long enough to get an approach at least to true values.

541. C. C. LEWIS.—"A Summer Resort" is simply an outline of an illumination, and of neither photographic nor pictorial interest. We notice, however, that there is less halation than in usual in such subjects and suppose either a backed or very thickly coated plate was employed.

542. T. S. HOMANS.—"The Old Mill" is an example of laudable effort to make a picture of a very unpicturesque subject, an old mill with its dam and bridge, neither of which is anything but a series of parallel lines. You have probably made the best of it, but the best is bad enough, especially as if you divide it vertically down the middle one half is completely filled, while the other is comparatively empty. Then the photography is as faulty as the subject is unpicturesque. From under exposure both foliage and shadows are simply black masses, while the sky toward the horizon is white as chalk, neither of which in any sense represent nature. An exposure twice as long would not have been too much.

543. C. H. MOORE.—"The Reaper's Pause" is not nearly up to your own standard. The dress of the model is utterly unsuitable, especially the long flowing skirts; the right arm is wooden, and the expression rather the consideration of one of life's sad problems than that of one taking "a blow," i. e., a momentary rest from hard work in a stooping position. The whole arrangement needs reconsideration, and the introduction of a "stook," a dozen sheaves set on end, is almost essential.

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tioga Centre, N. Y. (during July and August to Point o' Woods, N. Y.), reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

GALVESTON CAMERA CLUB AND EXHIBITION.

We are glad to see that the Y. M. C. A. Association of Galveston, Tex., is about to form a camera club as a part of its operations, and for that purpose have issued a circular, from which we extract the following:

On the top floor of the physical department annex we have a dark room containing about thirty lockers, a red light, abundant supply of running water, a large sink and shelves, which is at the disposal of all members who wish to develop their own plates. On the same floor there is a fine room with southern exposure which will make an admirable club room.

We are about to organize a "Camera Club," and would like to have you join as a charter member. The full details of the organization, samples of proposed constitution, etc., will be presented on the night of our exhibit, and if there is any *probability* of your joining we would be very much pleased to have you send us your name at once. Will you help us to make a success of our exhibit by entering on or before August 19 six samples of photographs taken by yourself? Three of these photographs must have been developed, printed and mounted by you personally. Write your name, address, and the subject of your photograph plainly on the back of each copy.

There will be a committee of award who will pass upon the work and present the prizes. It is hoped to publish the very best picture exhibited, in a local paper. Other details of the competition will be announced later in the public press.

If you have any suggestions which will tend to make this first exhibit a success kindly state them in writing.

Trusting that you will fill out the enclosed coupon and send it at once to me, I am,

Very sincerely yours,

H. SMITH, *Physical Director.*

The circular was accompanied by an invitation both to contribute pictures and attend the exhibition, and we hope the meeting will result in the formation of a strong club, as there are at least 200 amateurs in the city.

Our Table.

"NATURALISTIC PHOTOGRAPHY," by P. H. Emerson. *New York: the Scovill & Adams Co.*

This is the third edition of a book that attracted considerable attention when it first appeared; more, and much amusement also, when a second edition was withdrawn and much of its teaching recanted; and which, in its enlarged and modified condition, is well worth the attention of all who aim at picture making by photography.

It is no small thing to say of a book, that in spite of the phenomenal egotism of its author, and the freedom with which he applies abusive epithets to all who do not think as he does, that it may be read with both pleasure and profit; and that, and very much more, may be said in favor of "Naturalistic Photography." Indeed it may be truthfully said that for the present popularity of true pictorial photography we are more indebted to the earlier editions of this book than to all other influences combined.

We need hardly say that the get up of "Naturalistic Photography" is highly creditable to its publishers, and have pleasure in saying that it should be carefully studied by every photographer who aims at something higher than "the usual thing."

FROM G. GENNERT, of New York, comes a copy of his new catalogue and price list, which, in addition to everything included under regular photographic supplies, contains an elaborate list of his own specialties in both apparatus and material, several of them, such as Adurol, an account of which will be found on another page, being listed for the first time. As it may be got for the asking, photographers will be studying their own interests by obtaining copies.

Letters to the Editors.

DEAR SIRs: Will you kindly tell me, through the magazine if you think best, what the merits of the prize picture, entitled "Cat's Cradle," in the July number, consist in? I can see nothing to it beyond two fair poses, including a couple of fashionably rounded, shirtwaisted sleeves. Both faces are badly in obscurity. If the central feature is the cat's cradling, that is also in obscurity. I have covered the title and shown the picture to a bright girl, interested in photography. She looked at it and asked, "What is it?" I asked, "What are they doing?" Her reply was "I can't see." Then looking more carefully, she said, "It looks a little like playing cat's cradle. Oh, yes, I think I can see the string!"

Then I have shown it to two ladies, one an artist of several years' experience,

and a teacher of art in Brooklyn. One says, "Two negroes? No. One is a white woman, doing up the other's hand. What is such a picture for, anyway?" The other said, "All I can see is what looks like a woman bandaging another's hand. The picture is bad all over." The title was covered in both the above instances.

Other friends, interested in amateur photography, say that it is a dead failure, and a negative that they should have thrown away. One remarks that only favoritism could have given a prize to so poor a picture.

Perhaps your Boston readers do not appreciate "Art in Photography," and should be enlightened. In my benighted ignorance I feel that I have thrown away hundreds of negatives no worse, not caring to make prints from them.

The "Cosmos" in the same number, is beautiful, and "Mount Cardigan" is truly fine. The "Calm Before the Storm" is good, but excuse me if I say made up. No such shadows were ever seen in the water with storm clouds coming. The water shadows belong to a morning of perfect calm, when the surface is without the slightest ripple.

Very truly yours,

W. K. MOODY.

[Our correspondent seems to have forgotten that we were not the judges of the prints sent to our late "Beginners' Competition," or not to have read our notice thereof in our March number, page 106, a reference to which will show that the prize was not awarded to the "Cat's Cradle," nor even to the set of six prints to which it belonged; that the judges did not consider any of the competitors entitled to a prize, but that they recognized "promise" in several of the sets, including that to which the print in question belonged. It will show further that the prizes were awarded solely for the encouragement of those in whose work there was that promise, and evidence of a desire to advance.

We may, however, say that while we are thankful for the criticism of our correspondent and his lady friends, and wish that others of our readers would follow the good example, there is much more in the "Cat's Cradle" than they seem to have recognized, and which further study will elicit. We may say also that we quite agree with him in supposing that, in what may be called the days of depiction, he, as we know we have, may have thrown away many negatives that would now be considered well worth printing from.

By the words "made up," in his reference to "The Calm Before the Storm," we hope he does not mean to imply that the printing in of clouds, the lowering or intensifying of shadows, or, in short, what is sometimes called "dodging," either in negative or print, or on both, are objectionable, as we hold, and have always taught, that the picture maker by photography is entitled to produce his picture in whatever way, or by whatever means he thinks best.—Eds.]

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander Davis), Washington, D. C., from whom copies of patents may be had.]

THOMAS MANLY, London, England.

Photographic Printing. No. 628,012.

This process consists of producing photographic pictures in pigmented gelatine on the image produced by exposure to light of the sensitive material, prepared by a solution containing a light sensitive chromic-acid compound and a manganous salt,

consisting in fixing the printed image by washing all soluble salts out of the material, drying the same, bringing pigmented gelatine in contact with the printed material, using a solution containing acetic acid and a reducing agent, drying the pigmented material thus treated and developing the image by dissolving in hot water those parts of the pigmented gelatine which have not been rendered insoluble by the action of the manganic acid, thus producing a picture in pigmented gelatine.

CHAS. W. BLODGETT, New York, N. Y.

Photographic Washing Apparatus. No. 628,917.

An upright holder is adapted to receive a number of independently movable trays and support them in a slightly inclined position, and in such a manner that water overflowing from those above will not enter those below. A vertical water pipe is provided with separate outlets for each tray.

HERMAN CASLER, Canastota, N. Y., assignor to the American Mutoscope Company, New York, N. Y.

Kinetographic Camera. No. 629,063.

The film passes from the supply spool over a main feeding drum to the winding spool. A continuously moving feeding device engages the film, and an intermittently operated stop is provided to engage the film and hold it stationary during an exposure, the continuously moving feeding device being designed to slip over the film when the film is held stationary. Means are provided for synchronously operating the shutter and the film stop.

T. J. BURFIELD, Waconia, Minn.

Multiplying Attachment for Cameras. No. 629,542.

The camera box is provided with an interior frame which supports slides which are arranged to be adjusted laterally to produce successive partial plate exposures. The frame is provided with suitable markings to indicate the successive positions to which the slides are moved to make exposures.

Answers to Correspondents.

[Correspondents are requested to not ce their communications intended for the editors, from July 1st to September 15th, should be addressed to DR JOHN NICOL, Point o' Woods, N. Y., where he will, as usual, give instruction in the theory and practice of photography. After September 15th to Tloga Centre, as usual.]

ALICE BARTLETT.—If you expose long enough to get true values in the landscape the sky will generally be thin enough to print to a suitable tone. Clouds and landscape are rarely secured at their best on one plate. You should make a series of cloud negatives with ortho plates and ray filter or color screen, and print in from one that suits the negative. Where the sky prints white on a print, the landscape part of which is good, it may be toned down to something like truth by exposing it in the printing frame without the negative, covering the landscape with a large sheet of cardboard, which should be kept moving up and down from horizon to zenith, in the well known way.

D. CAMPBELL.—If what we have already written on the long focus question has not convinced you, we give you up, and quite agree with you when you say that if you are "quite pleased" with your work you would be a fool to waste money on another lens. You ought to be happy, as you are the first we have ever known to be "quite pleased" with their work.

CHARLES A. ZEIGLER.—We have not had an opportunity of comparing the plate you employ with those you mention. Why not get a box of each and compare them for yourself? It will be excellent practice. We are always willing to help our readers to any information that they cannot get by experiment themselves, even if it should occupy some of the time that we can ill spare, but information so easily obtained, and the obtaining of which would so benefit them, we expect them to find for themselves.

R. R. PEARSON.—We presume that by this time ammonium persulphate may be got from any of the larger stock dealers. We do not know the price. We cannot say whether it is the "best reducer" without knowing the nature of the required reduction.

A. H. THAYER.—The "factors" of the various developing agents, as given by Watkins, have been several times given in our pages. They will be found in our back numbers, but we are too far from home to be able to look them up. It is easy to find them for yourself.

CHARLOTTE L. BREWER.—The use of the glossy or matt surface is a matter of taste, but a glossy surface on such large prints as 7 x 5 is, in our opinion, very bad taste. We may say that, so far as our experience goes, highly glossy paper is employed only by the less important professional photographers.

W. L. MORRIS.—The "date limit" on the films referred to does not mean that they will not keep longer, but that the maker will not hold himself responsible for them after that time. We have to-day exposed and developed one from a packet that has been in our possession for over two years, and it is apparently in as good condition as when received. There is no *best* developer; that which you are accustomed to and most thoroughly understand is the best for you. The formula we employ will be found in our "Right Road to Photography," which will clearly answer all your other questions.

R. FENTON.—Instructions for printing in clouds will be found in back numbers; we cannot spare room in this page. For ordinary landscape purposes the cheap single lens will be in *every* respect as suitable as the most expensive doublet on your list. You are more likely to secure the desired atmosphere with $f/16$ than with $f/32$; indeed, under most conditions, the latter is fatal to true pictorial work.

PAUL PRY.—There are mathematical reasons that induce us to think that the claim cannot be sustained, but we are too far from the necessary appliances for putting the question to a practical test. We shall do so as soon as we get home, toward the end of September, and write you privately.

ELIZA G. FLEMING.—The probability is that your lens is all right, and that the fault is in the camera. Before sending the lens see that the focusing screen and plate are in the same plane; and in any case do not send till after the first week in October.

W. C. SAWYER.—We have no recollection of the print to which you refer, but if it came and was considered worthy of reproduction it will appear at the convenient season, but when that will be we cannot tell. We are too far from home to refer to past correspondence.

F. W. TUTTLE.—The best book for your purpose will be "The Right Road to Photography," 75 cents, to be got from our publishers. In it you will find answers to almost any question that can arise.

J. K. THORNBURG.—We cannot give you the required information as you do not give the focus of your lens, or the length to which you desire to extend it by the supplementary lens. Why not experiment as did the author of the article to which you refer?

SALE AND EXCHANGE.

[This department is for the benefit of SUBSCRIBERS who have photographic material, apparatus or books which they wish to exchange, and such wants will be inserted free of charge one time. For each additional insertion we will charge one dollar per month. Dealers advertising in these columns will be charged double our ordinary advertising rates.]

Wanted.—Second-hand camera, either No. 4 bull's-eye special, or No. 4 bullet special. Correspondence solicited. W. H. Cadwell, Nashua, N. H.

Wanted.—Some one to form a club of subscribers to this Journal. A Gundlach 5x7 camera with good lens given as premium. Write for particulars. Address THE AMERICAN AMATEUR PHOTOGRAPHER, 239 Fifth avenue, New York.

For Sale.—Long focus Pony Premo, 4x5, with carrying case and one plate holder. Cost, when new, \$35, will sell for best offer over \$15. Cornele G. Ross, 80 Church street, Rutland, Vt.

Wanted.—We want to buy photographs of picturesque or historical flouring, grist and corn mills everywhere. Send photo with price, or write us what you can furnish. A brief description will add to value of photo. Mitchell Bros. Co., Publishers American Miller, Chicago, Ill.

For Sale.—One Eastman View Camera, 5x8, with 12 double plate holders and roll holder; cost new \$71.50; will sell for \$40; also, Voigtlander Euryscope lens, Series IV., No. 1, will cut 7x9 plate. 8 inch focus, fitted with Triplex improved shutter; cost new \$62.50; will sell for \$40, or will sell the complete outfit for \$75. All are in perfect condition. E. W. Simmons, Nevada City, Cal.

For Sale.—A 6½x8½ Zeiss lens, series 3, fitted with a Bausch & Lomb diaphragm shutter, cost price \$80.00; will sell for \$60.00; this lens is in perfect order. A 5x7 Tele-Photo Poco with six plate holders, without lens and shutter, cost price \$33.00, will sell for \$26.00. A 6½x8½ Tele-Photo Poco with six plate holders, without lens or shutter, cost price \$41.25, will sell for \$33.00. A 8x10 Tele-Photo Poco with three plate holders, without lens or shutter, cost price \$43.00, will sell for \$33.00. These cameras are new and have never been used. A. Burn on, 49 Sixth Avenue, New York City.

For Sale.—4x5 Pony Premo, Sr., Victor R. R. lens and shutter, plate holder and carrying case; little used; equal to new; list price, \$28; will sell for \$14. C. O. D.; privilege of examination. F. P. Streep, Chestnut Hill, Philadelphia, Pa.

For Sale.—One pocket folding Kodak, cost \$10, and a Pony Premo, Sr. camera, including three plate holders, tripod and ray filter. Cost over \$35. Will sell on terms to suit purchaser. A No. 1 reference required. Fred. H. Luebbert, 331 Stoneycreek street, Johnstown, Pa.

For Sale.—One 6½x8½ Bo-Peep B camera, fitted with R. R. lens, with three plate holders. A bargain, in first-class order, and has been used but little. Cost \$40; will sell for \$25 cash. J. H. Roberts, Salmon Falls, N. H.

For Sale or Exchange.—One Dallmeyer rapid rectilinear lens of 8 inch focus, with Prosch triplex shutter, \$30. Original price, \$56. One Scovill & Adams Henry Clay stereoscopic camera, \$40. Original price, \$80. All in perfect order. Will exchange both for one Goerz anastigmat, 9½ inch focus. F. Ruppert, 94 West 104th street, New York City.

Wanted to Exchange.—One 4x5 Manhattan wide angle Wizard, complete, with two sets lenses, one Ex. R. R. and one W. A. outfit, used less than 6 months. Seven hard rubber plate holders, 4x5. One solo leather carrying case for above. One 8x10 Waterbury view lens. One 4x5 view lens. One 4x5 view lens, unmounted. All in good condition, for a Telephoto Poco A, either 4x5 or 5x7, with B. & L. shutter. D. W. Sloan, Golconda, Ill.

For Sale.—One 11x14 Anthony studio camera with extra long draw, and adjustable plate holder for any size plate up to 11x14; cost \$50. One studio stand for same. One 11x14 Nelson view camera with two double plate holders, cost \$30. One Bausch & Lomb 10x12, series D, rapid portrait lens; will cover 11x14 plate, cost \$75. One large burnisher, cost \$32. One 8x10 tray. Six 5x7 printing frames. One 8x10 and cabinet size printing frame. One adjustable five-seat grouper. One head rest. One reflector stand. This outfit has been very little used. Will sell for \$110. E. Williams, 1205 Michigan ave., Chicago, Ill.

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By George W. Norris

"A COUNTRY ROAD."

THE AMERICAN AMATEUR PHOTOGRAPHER.

VOL. XI.

OCTOBER 1899

No. 10.

In the Land of Falling Waters.

BY HERBERT SHERMAN HOUSTON.



No. 548.

By Grace Mounts.

"ONE OF THE UNEMPLOYED."

HERE is something fascinating to the amateur photographer in focusing a camera on a waterfall. It is a feeling quite apart from that experienced in taking a group of lily pads on a pond's quiet bosom. In tumbling, dashing waters the sense of life is so strong that the desire is compelling to reach through the lens after its very spirit. The feeling is akin to the thrill of the novelist in depicting the psychological moment—to that of the playwright in catching the dramatic instant.

A waterfall, therefore, is an amateur photographer's delight. A series of them is his elysium; but the trouble ordinarily is, in a paraphrase of that famous remark of the Governor of North Carolina to the Governor of South Carolina, "It is a long time between waterfalls." The stretch of distance has its counterpart in the stretch of time between Horace's *Fons Bandusiae* and Southey's "Cataract at Ladore"; but there is a place where waterfalls are abundant, and, strange to tell, it is within a short drive or cycle ride from that famous rock in the Delaware River where the States of New York, Pennsylvania and New Jersey meet.

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Here, in Pike County, Pennsylvania, streams come leaping down from the mountains in cataracts, rapids and falls of nearly all sizes and shapes. Leaving the Erie Railroad at Port Jervis, after a three hours' comfortable ride from New York City, one will have a most picturesque drive down the shores of the Delaware into this land of falling waters. Going along the wooded road, with now an overhanging mountain above, while the river sparkles through the trees below, and now a fine stretch of water with the



"A MOUNTAIN BROOK."

rolling farm lands of New Jersey rising beyond them, there will be many opportunities for some good plates.

At Milford, Pa., which is but seven miles from Port Jervis, a longed for opportunity to point the camera at a waterfall is first offered. Here are the Sawkill Falls, beloved of the anglers long before the amateur photographer ever thought of coming down to this sleepy town, or, indeed, even before the amateur photographers' forefather, Talbot, had caught his first picture on a sensitive surface. There are many other views besides the leaping waters of the Sawkill, but they're another story. This writer is in quest of water sprites, so he will take the reader on down the Delaware toward Dingman's Ferry. Only a few miles will be traveled, how-

ever, till a sign on the road will direct one off to the right, where the Raymondskill's waters are making music over the rocks. There are three falls of the Raymondskill all in a group; the Upper, the Lower and the



"SAWKILL FALLS, MILFORD, PA."

Bridal Veil; the last is something worth going a long way to see, for here, with the green temple of trees arched above, this water nymph, arrayed in a misty bridal veil, plights her troth with the Lower Falls. Here at

Raymondskill there will be the need of a number of plates, for a single view of each falls will in no way satisfy one.

Going on down the river Dingman's Ferry is soon reached. This fine old village, rambling along the Delaware, is in the very heart of the cataract country. Within a few miles in almost any direction there are waterfalls, ranging through the tiny stream of Silverthread, the long leaps of High Falls, and the more moderate but still swift and picturesque



"A GLIMPSE OF THE DELAWARE."

waters of the cascade in Adams Brook. In fact, there is almost endless variety in water studies. A range of interesting work in lights and shadows will be found, for in some places the falls are in heavily wooded glens and again they are nearly in the open.

The Silverthread Falls is a very unusual one, and it is certainly fittingly named, for it does closely resemble a silver band stretched over brown rocks. One scarcely gets out of hearing of their low murmur till

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"IN WINONA GLEN."

the andante music of High Falls strikes the ear; these waters play a symphony in falling through the different stages of the long descent.

In getting admission to these various woodland music halls, an entrance fee is usually charged by some thrifty citizen who builds a gate across the road and charges a toll, but it is always a very moderate exaction, and one loses all thought of it in the sights and sounds to which it admits one.

A view different from the Silverthread and High Falls is had at the Alhambra Rocks on Indian Ladder Brook. Here the water rushes in generous quantity over a series of rock benches or steps. In getting a camera adjusted in the right place to insure a good plate the thought is apt to come to one, born of the wild and romantic surroundings, that some Indian might come into "his field" preparatory to climbing down the ladder. The lights and shadows at these cascades are notably fine. Another striking picture in the way of cascade is to be had on Adams Brook, near Conashaugh, which is but three miles from Dingman's Ferry, and in Winona Glen a beautiful plate can be made of a cascade as it grows to the dimensions of a falls.

One of the most fascinating things about this region is the opportunity offered to see every stage in the evolution of a falls. There are the swift-flowing mountain stream, the rapids, the cascades, and then the sheer leap of the falls. This opportunity, moreover, is offered not only on a single stream, but on a score of them, so that the camera has a chance to catch flowing water in almost every conceivable condition.

After the course of instruction which is offered in this picturesque region of Pennsylvania one may feel equal to an advanced course in water photography and a graduating diploma. If so, the drive back to Port Jervis will bring one to the railroad, and after a comfortable night on the train one will get into Suspension Bridge bright and early in the morning, ready for a day with that crowning cataract of all, Niagara.



Niepce and Daguerre.

WE have always maintained that to Talbot and not Daguerre belongs the honor of being the father of modern photography, and there are not a few who would even deny to the latter the honor of the discovery that bore his name. The views of such will, we think, be strengthened by a perusal of the deed of partnership entered into by Niépce and Daguerre, which we extract from the *Bulletino della Società Fotografica Italiana*.



"PIKE COUNTY WATERFALLS."



"ALHAMBRA ROCKS—INDIAN LADDER BROOK."

BASIS OF PROVISIONAL AGREEMENT.

"The undersigned, M. Joseph Nicéphore Niépce, landowner, residing at Chalon sur Saône, department of the Seine and Loire, of the one part, and M. Louis Jacques Mandé Daguerre, artist painter, Member of the Legion of Honor, and manager of the Diorama, of the other part, hereby enter into the following provisional agreement for the purpose of founding a partnership:

"Whereas, M. Niépce has made certain studies for the purpose of recording the views of nature by a new method without the aid of a draughtsman, and various experiments constituting this discovery have been the result. The said discovery consists in the spontaneous reproduction of pictures formed in the camera obscura: And whereas M. Daguerre, to whom the discovery has been made known, perceiving its great interest and the great improvement of which it is capable, has offered to join M. Niépce for that purpose, and for securing all the benefits which may be derived from this new kind of industry: In view of these facts, the parties hereto have agreed to the following provisional and fundamental conditions of partnership:

"1. A partnership shall be formed between MM. Niépce and Daguerre, under the commercial style of Niépce-Daguerre, for the joint purpose of

perfecting the said discovery made by M. Niépce and improved by M. Daguerre.

"2. The partnership shall be for the term of ten years, dating from this fourteenth day of December, and prior to the expiration of that term shall only be dissolved by mutual consent. In case of decease of either of the partners, his heir shall succeed to the partnership for the remainder of the unexpired term of ten years. Further, in the event of the decease of either of the partners, the said discovery shall only be published under the joint name specified in clause 1.

"3. Upon signature of this agreement, M. Niépce shall disclose to M. Daguerre, under the seal of secrecy, which shall be so kept under penalty of all expenses, damages and interest, the principle upon which the discovery depends, and shall furnish an exact and complete written statement of the nature, the working details and the different modes of applying the processes connected therewith, in order that the experiments for perfecting and utilizing the discovery may be carried out as completely and quickly as possible.

"4. M. Daguerre, under the same penalties, undertakes to preserve



No. 538.

By Miss M. R. Case.

"THE DISTAFF SPINNERS."

with the greatest secrecy the fundamental principle of the discovery, and the nature, the use and application of the processes which shall be disclosed to him, and will co-operate, as far as possible, in the improvements which may be deemed necessary, to the best of his abilities and talents.

"5. M. Niépce gives and cedes his invention to the partnership as an asset, in consideration of half the profits which may be derived from it, and M. Daguerre contributes a newly designed camera, his talent and his industry, in consideration of the other half of the said profits.

"6. Upon signature of this agreement, M. Daguerre shall disclose to M. Niépce, under seal of secrecy, which shall be so kept under penalty of all expenses, damages and interest, the principle upon which the improvement in his camera depends, and will furnish an exact written statement of the nature of the said improvement.

"7. MM. Niépce and Daguerre shall contribute in equal shares the capital which may be found requisite for the partnership.

"8. When the partners think it desirable to apply the said invention to the process of engraving, that is to say, when they have decided what advantages it may possess which would enable an engraver to make a trial plate, MM. Niépce and Daguerre hereby agree to select no one but M. Le Maître for carrying out the same.

"9. Upon execution of the final agreement, the partners shall mutually appoint a manager and a cashier of the firm, which shall be located in Paris. The manager shall conduct the business as decided by the partners, and the cashier shall receive and make all payments as ordered by the manager in the interests of the firm.

"10. The manager and cashier shall be elected for the term of the present agreement, but shall be eligible for re-election. Their services shall be gratuitous, or a portion of the profits may be awarded them, as the partners may think fit, when the final agreement is made.

"11. The cashier shall render an account to the manager each month, showing the position of the firm, and every six months the partners shall divide the profits, as stated above.

"12. The cashier's accounts, showing the position of affairs, shall be balanced, signed and attested each half year by both partners.

"13. The improvements which may be made concerning the discovery and the improvements in the camera shall be the property and for the benefit of both partners, and, when they have attained the object in view, they shall make a final agreement upon the basis of these presents.

"14. The net profits of the partners derived from the firm shall be shared equally between M. Niépce, as inventor, and M. Daguerre for his improvements.



"A LEISURE MOMENT."
BY
HENRY D. ALLISON.

No. 539.

"15. Any dispute which may arise between the partners concerning this agreement shall be decided by arbitrators appointed by each party privately, according to Article 51 of the Commercial Code, and their decision shall be binding, without appeal or revocation.

"16. If it should be decided to dissolve the partnership, the liquidation shall be undertaken privately by the cashier, or by both partners together, or by a third party, to be appointed privately, or by some person appointed by a competent court at the instance of the more active partner.

"The whole of this agreement has been entered into provisionally by both parties, who, for the execution of these presents, elect as domicile their respective residences, as specified above.

"Executed and signed in duplicate at Chalon sur Saône the fourteenth day of December, one thousand eight hundred and twenty-nine.

"Approved by me, though not written by my hand,

"J. N. NIEPCE.

"Approved by me, though not written by my hand,

"DAGUERRE."



No 547.

By W. M. Williams.

"THE PRIDE OF THE DAIRY."



By Dr. W. J. Furness.

"THE SQUATTER'S HOME."

Secco Films, British and Colonial.

OSWALD MOH, of Gorlitz, Germany, is a lucky man, who, by a happy thought leading to a happy hit, has jumped into a fortune of \$400,000, with an opportunity of investing a considerable portion of it at 20 per cent., and a probability of getting quite as much from each of America and Germany.

He is the inventor of the "Secco Film," noticed elsewhere and in previous numbers, which has been demonstrated throughout Great Britain with such success as to lead to the formation of a company willing to pay \$400,000 for the right to work it in that country and its colonies, and an additional \$100,000 as working capital.

The prospectus of a company in course of formation is not *always* the place to look for reliable information, but from other and private sources we have learned enough to warrant us in believing that the Secco film will ultimately, and that before very long, very largely at least, replace all other supports for the sensitive film. The following extracts from the prospectus will show what the promoters believe, and we have good reason to believe that their confidence is not misplaced.

Among its advantages may be mentioned the following:

(1) *Price*.—They can be sold at a large profit, at about the price of glass plates, and at about one-third less than celluloid films.

(2) *Weight*.—They are very light. The following comparative statement will make abundantly clear the superiority in this respect of the films over glass plates and celluloid films.

12 glass plates, 7½ x 5 ins.	weigh 2¼ lbs. approximately.
12 celluloid films of the like size	" 1¼ oz. "
12 Secco films of the like size	" 1-3 oz. "

(3) *Durability*.—They are very durable, unbreakable, and not easily torn. They do not require to be packed in boxes. Five packets (containing each one dozen films) occupy as nearly as possible the same space as a box of one dozen glass plates.

(4) *Safety*.—They are neither explosive nor combustible. Great importance, as appears hereafter, is attached to this advantage.

(5) They are as easily manipulated as glass plates and celluloid films. They can be used with all existing fittings, chemicals, baths and apparatus, and in roll holders.

(6) They are very sensitive to light, as none is lost by passing through the support during exposure. In this respect they excel glass plates and celluloid films with similar emulsion.

(7) The finished negatives require no varnishing, and are damp-proof.

(8) They are very thin, and in consequence print quickly. *They can be printed from either side without loss of sharpness.* Therefore, stripping-plates for colotype and other photo-mechanical processes are rendered unnecessary, and in the carbon process double transfer is no longer essential.

(9) THEY ARE WITHOUT THE FAULT OF HALATION OR BLUR when bright objects are photographed, *e.g.*, a brilliantly lighted church window can be reproduced with all its delicate tracery clearly defined.

(10) During drying they are impervious to dust and the attacks of insects; features of great importance in tropical climates.

(11) They are especially suitable for X-ray work, as, by reason of their transparency, several pictures can be taken at once.

(12) They can, by using an ordinary pair of scissors, be cut from larger sheets to any required size.

(13) They can be retouched very easily on either side without the use of a retouching medium.

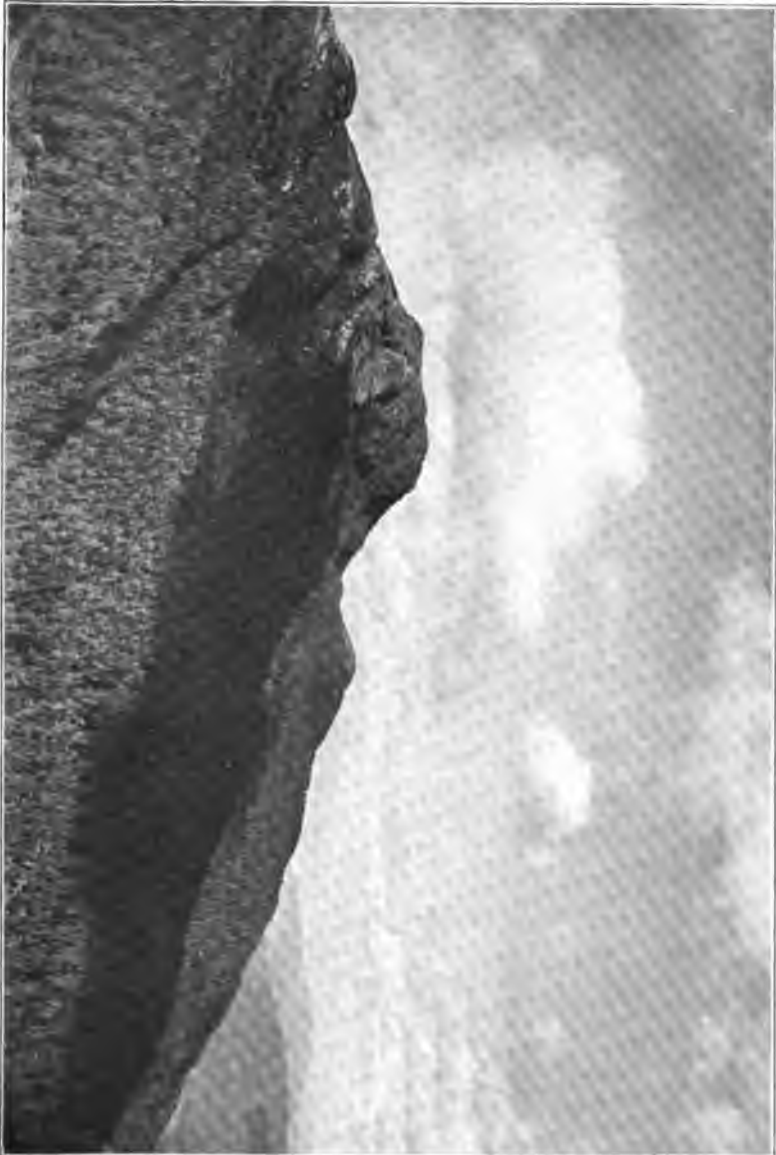
(14) They are suitable for the production of transparencies of all kinds.

(15) They do not roll or curl up.

(16) They are not subject to electric appearances, marks, or spots.

(17) They are especially suitable for the production of enlarged negative and can be printed on all kinds of paper.

If we take it for granted that the Secco film is all that is claimed for it, the natural question is, What are our American platemakers going to do about it? That nothing shall be done is simply out of the question; and equally so is the idea that the hundreds of thousands of prospective consumers of the film can get it only at the enhanced price incident to importation under protection.



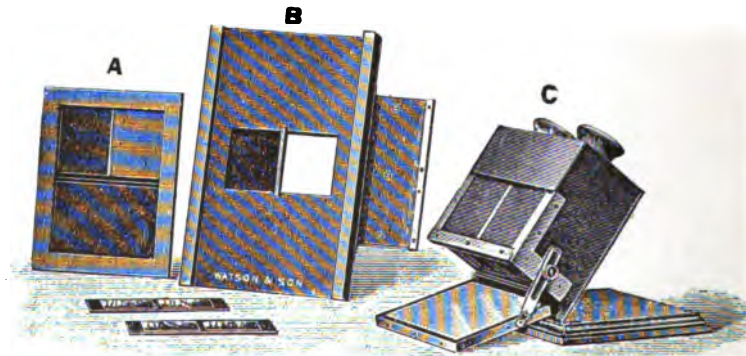
"MOUNT HAMILTON."
BY
W. C. SAWYER.

Our platemakers have hitherto done well both for and by us, and as we believe in respecting their vested interests, we should be sorry to see them superseded by a syndicate or any other form of organization in the handling of what we feel convinced will be the photographic film of the future. Although they are perfectly able to take care of themselves, it can do no harm to suggest that they should take time by the forelock and make such an arrangement as to render that impossible.

Just what that arrangement had better be is not for us to say, or even suggest, but it should be such as will best conserve the interest of both parties—the makers in not excluding any of them from producing the films, and the consumers in getting them at a reasonable price.

The "Kromaz."

THE Kromaz is a system of color photography enabling one to prepare transparencies which, when viewed binocularly, show the object not only in relief, but also in color. It is obvious, therefore, that between this system and the kromskop method there is some analogy of principle, but it will be seen from the following description that the Kromaz differs greatly in detail from the older system :



A—Set of color screens in frame.

B—Repeating back, fitting into camera and taking half-plate slide with screens in position.

C—Stereoscope for viewing photographs in color.

The color records consist of two pairs of images, which are produced by two exposures only in a single lens camera, the double image being secured in each case by means of mirrors. Of the first pair one image is given by the blue, the other by the red, and of the second pair both images are given by the green. Each pair is secured simultaneously; thus, the red and the blue are given together by the first exposure, and the two greens by the second.

The four images are all taken upon one half-plate, which is developed and fixed in the ordinary way.

The Kromaz back consists of a frame so designed as to be capable of easy adaptation to almost any front-focusing half-plate camera, by means of the dark-slide grooves. When fixed ready for use, the two square apertures are immediately behind the lens, and over them in parallel grooves the dark slide moves in such a way as to permit of the two halves of the plate being exposed in succession.

When the negative has been developed, fixed, and dried, a positive is taken from it, and this positive, when cut and mounted, constitutes the chromogram and may be viewed in the chromo-stereoscope.

The following extracts from the instructions will put the reader in possession of an outline of the plan of working the Kromaz:

The three screens (one of them, the green, being double or stereoscopic) are arranged together in a frame which fastens on an ordinary half-plate dark slide, so that when the Kromaz back is fixed on the camera ready for taking and the dark-slide shutter is withdrawn, the image from the lens can only reach the sensitive plate after passing through one or other of the color screens, which robs it of all but the particular color required to be registered at the exposure in question.

The back can be attached to almost any front-focusing half-plate camera.

A plate sensitive to all the colors of the spectrum is necessary.

These plates should be put in the dark slide in almost total darkness, as, owing to their sensitiveness to red, they would be quickly fogged by the ordinary light of the developing room.

In the Lumière panchromatic or Cadett spectrum we have a plate sensitive to all the colors of the spectrum, but not in an equal degree, for the red and the green require to act on the plate several times as long as the blue to secure their proper effect. A fair average ratio of exposure for the three colors is blue 1, red 10, green 7, but by the Kromaz system the red and blue are paired and given the same exposure, and this is accomplished by slowing down the blue to the red by cutting off a large proportion of light with an orthochromatic screen.

MAKING THE POSITIVE.

Much of the success of the final result depends upon the quality of the positive taken from the negative.

The simplest way to obtain it is by contact printing in a printing frame. A Cadett photo-mechanical plate gives excellent results, the most convenient light being that given by an ordinary candle; the frame should be held about 30 inches from the flame and waved about slightly—the exposure of from two to three and a half minutes, according to the density of the negative, is longer than that required when using a gas flame or daylight, but it is more reliable, and a good positive can be obtained with greater certainty than by other means. *Development must not be too quick*; use a weakened solution of the developer, and aim at producing softness of image with long gradation.

CUTTING AND MOUNTING OF POSITIVES.

Before cutting the positive for mounting, hold it up to the light and place one of the mounts over a pair of the pictures. Mark the film at the outer edges of the mount, then lay the positive on a table and cut the film right across, but slightly smaller than the outside of the mount; this is done to prevent any danger of the film dragging away from the glass when the latter is broken after being cut with a diamond or glass-cutter; it also serves as a convenient guide when cutting the glass.

To mount the positives, first take the pair of green images and lay it, film downwards, upon the mount, securing it with gummed slips of paper. Then, after it has been set aside for a few minutes to dry, slide it into the back of the Kromaz, film outwards, and push it as far as it will go. Next, take the second mount and put it over the colored screens on the top of the Kromaz, push it as far to the back and to the left as it will go, and then drop the remaining pair of images, film downwards, upon it. Shut the right eye and move the glass (not the mount) until the blue image falls exactly over the green and the color fringes cease to be visible, then superimpose the red image in the same way, and finally secure the glass to the mount as before. If, when the chromograms are dry it is found that they have altered slightly and the images in the Kromaz will not quite superimpose, the mounts may be filed at the edges until correct registration is obtained.

THE PUBLIC APPRECIATION OF ART is growing, thanks largely at least to photography. The Common Council of London have recently had on exhibition for only a few weeks a collection of Turner's pictures, and during that short time they were visited by 225,000 people.

The Contribution Box.

WASHING PRINTS OR NEGATIVES.

Dear Sir:

Your favor of July 24 is received, and I take pleasure in describing my print-washing scheme for the benefit of any who may be interested.

The affair, which is very simple and inexpensive, is made up as follows:

A soft pine board about three feet long by one foot wide, covered with table oilcloth to keep the board from getting wet and warping.

Two strips of wood about one-half inch wide, one-half inch thick, and as long as the board, to be nailed one along each edge of the board, to keep the water from running over the edge.

An iron pipe perforated with one-eighth inch holes about three-eighths of an inch apart. Pipe to be as long as the board is wide, plugged at one end and fastened across one end of the board.

A piece of rubber tubing to connect the perforated iron pipe with the water supply.

A bit of strong string or wire to hang the board up by one end, thus making an inclined plane down which the perforated pipe will send a thin sheet of water.

The prints are laid on the board face up and pinned by the upper corners (the pins being easily driven into the soft pine board with the thumb), the water is turned on and forms a thin sheet which flows both *under* and *over* the prints.

I leave mine to wash for an hour and then dry them by standing the board up on end in a current of air. Since using this method I have had no trouble from imperfectly washed prints. I use it in the sink or in the bath tub, according to circumstances.

This idea is original with me, and of those to whom I have shown it none had ever seen or heard of anything like it, but for all that, it may be old and in common use, or it may have been tried and discarded long ago. In either case I would much prefer that you do not publish it.

PRIMUS.

COPYING WITHOUT A CAMERA.

Do you know that very fair blue print negatives may be made from ordinary photographs or engravings by simple contact printing? I find the method very useful where fine work is not required. It is also useful for the copying of letters, papers or drawings, or indeed anything written or printed on only one side of not too thick paper.

All that is necessary is to lay the letter or print, face down, on the glass of the printing frame, and on this, also face down, the blue paper. I use "French Satin, Jr.," which has excellent keeping qualities, but any other make will do equally well if fresh.

C. E. C. K.

POST FIXING.

I believe that it is generally understood that negatives should not be exposed to light until after they are fixed, and until quite recently have always acted on that belief. Spending my holidays in a place where the only source of water was a windmill, and that unexpectedly getting out of order, water became so scarce for several days that washing my negatives was out of the question.

Sad experience had taught me that the only way to make sure of a certain class of negatives that it is an object to get and which never can be got again, is to develop day by day, and have them in the drying rack before I sleep; but the scarcity of water seemed to make that impossible.

Making my complaint to a camera man whom I had met for the first time, he assured me that "the talk about light injuring the negative between development and fixing is 'rot.' You develop in your bedroom in the ordinary way; rinse them in three or four changes of water, just enough to well cover the plate each time, and rear them up to dry; you need not even pull down the shade. In the morning wrap them up face to face and fix when you get home."

I followed the advice, although, I confess, with considerable doubt; and now I am glad to say that, having fixed the lot, I have over four dozen of as good negatives as I have ever made; some fixed immediately after development, some not till three weeks thereafter, and it is impossible to say which is which.

R. S. SANDEMAN.

Lantern Slides.

BY ALFRED HALL.

I HAVE, for several years, seen the slides circulated by the Exchange, and fully indorse all that the editors have said about such of the sets as they have noticed in the magazine. That may be summed up in a few words; a very few have been nearly perfect, a somewhat larger number fairly good, and the rest, amounting to fully 75 per cent., of such a nature as to be unfit for exhibition.

For this state of matters there are three reasons: (1) The fact that probably a majority of photographers, and nearly the whole of the general

public, do not recognize a really good slide when they see it; (2) the other fact, that slide makers generally are so afraid of fog that even when they have a suitable negative they do not expose long enough to impress the delicate half tones, and (3) many of them are made from snap-shot negatives, not one in a thousand of which have any of those delicate half-tones.

My object now is to give some seasonable advice to the many who, on their return from the summer outings and in preparation for the winter campaign, are about to make slides from their newly acquired negatives. The first essential in slide-making is the knowledge of what are the essential features in the technique of a good slide; to know what it should not, as well as what it should, include. A good slide should have no clear bare glass, except in the highest of high lights, and it should be nowhere opaque to the light by which it is to be shown, except in the deepest of deep shadows, or where something black is represented; and no good picture ever has many or much of those highest of lights or deepest of darks. In other words, a slide in which sky or water, roads, roofs of houses, or indeed anything else except such as a white painted wall or fence, or a white shirt or collar, are represented by bare glass, should never reach the mounting stage.

But as the best slide-maker can reproduce in the slide only what is included in the negative, the selection of that must be his first care, and I may say at once that if he has nothing better than what he has been able to produce by snapping, unless he be of the "one in a thousand," he had better leave slide-making alone.

The negative most suitable for slide-making is one that has been fully exposed, and developed with such care and knowledge as to be full of delicate detail and include all degrees of gradation from deepest dark to highest light, and no slide should be passed that does not faithfully reproduce that detail and gradation.

Contact printing, that is, printing from the negative in the printing frame in the ordinary way, only employing a lantern slide plate instead of printing paper, is the simplest and most convenient method where neither enlargement or reduction is required, but where either is necessary copying in the camera must be resorted to, and if the operator is equally acquainted with both methods the result in either case will be the same.

Photographers generally are agreed in saying that in negative-making there may be considerable latitude in exposure that may be allowed for or corrected in the development; or, in other words, that the development may be altered or modified to suit the exposure; but in transparency

making it is the reverse. The developer should be an unalterable quantity, and the exposure made to suit it.

So far as I know, there is no developing material, or no particular formula, better than all or perhaps any of the others. The material should be such as does not tend to opacity in the lights, and the strength such as will work slowly and cleanly without hardness.

The following, slightly modified, that appeared in this magazine about two years ago, answers the purpose admirably, although under certain conditions, especially if the temperature be high, an increase of the bromide is desirable:

Ortol	30 grains.
Potassium metabisulphite	15 "
Potassium bromide	5 "
Sodium sulphite	150 "
Sodium carbonate	100 "
Water	10 ounces.

This will keep for several weeks, and plate after plate may be developed in, say, half of it, to the extent of half a dozen at least; each just what a slide should be, if the negative has been suitable and the exposure correct.

But, as I have said before, success depends entirely on exposure, and as a transparency on glass is one of the most technically beautiful of all photographic productions, and one technically perfect slide is worth any number of those that are not so, the aspiring slide-maker should simply expose plate after plate, or, if he is economically inclined, cut one into strips and expose strip after strip, till he has hit on the exact thing.

The behavior of the plate in the developing solution is an unfailing index to correct exposure. The time between first contact with the solution and the appearance of the first trace of an image will depend on the nature of the plate, the temperature, etc., but the *order* in which the various parts appear is always the same. First the deepest shadows, if there be any such in the subject; then the half darks, merging into the middle tints; although neither of those should come so long before the objects in higher tone as to be developed to opacity instead of remaining as half lights. The deepest darks are followed by half darks, middle tints, half lights, and last of all, that which gives gradation in all but the very highest light, which alone remains as unaltered silver bromide, and after fixing is simply clear glass.

Slides made in this way, while very much better than at least nine-tenths of all that find their way into the Interchange, are still capable of

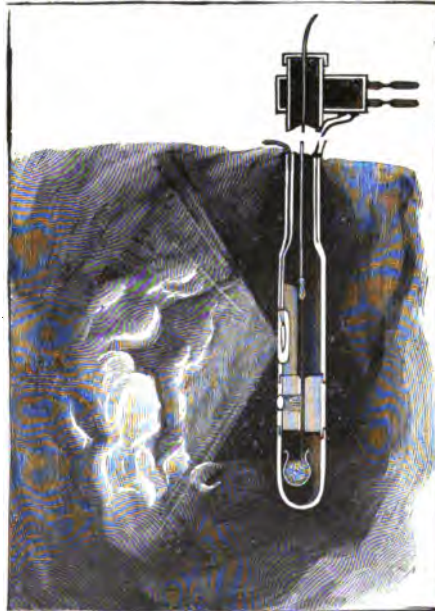
considerable improvement, but how to effect that must be left for another article, as I fear this has already exceeded the thousand words to which I was limited.

Photography of the Stomach.

Dr. Max Einhorn, of New York City, made a communication to a medical journal some seven years ago regarding "gastrodiaphany," in which a miniature Edison lamp in a special mounting attached to a soft rubber tube containing a wire was introduced into the stomach so that an examination can be made of it. This method was called "gastrodiaphany," as the stomach became translucent. The object of this device was to show the size and situation of the stomach to the eye and also to recognize tumors or other gross anatomical changes of the anterior wall of the stomach. This was, of course, a different apparatus than the "polyscope," which is used for looking into the stomach, and was not intended to replace any such device. It has been found to be of considerable value to surgeons.

In the same paper Dr. Einhorn described a camera for photographing the interior of the stomach, but owing to technical difficulties, the camera was not constructed by Dr. Einhorn. Such a camera has, however, been perfected by Dr. Fritz Lange, of Munich, Germany, on almost the identical lines given by Dr. Einhorn.

Through the courtesy of Dr. Lange we are enabled to present an accurate illustration of the device employed. The camera is a marvel of compactness, and is constructed on exactly the same principles as all cameras for taking moving photographs, although, of course, there is no attempt made to combine them so as to project the actual operations of the stomach. The camera itself is swallowed by the patient, and it contains a small electric lamp for illuminating the walls of the stomach. A photographic film twenty inches long and a quarter of an inch wide is wound at the bottom of the camera. One end of the film is fastened to the cord, which runs freely in the tube. When the cord is pulled, the film is drawn slowly past the lens. The cord and the conducting wires must, of course, be swallowed with the camera itself. When the camera reaches the bottom of the stomach the surgeon begins to pull the cord, which runs the film past the lens. The electric light is then turned on, and, after the sensitive film has been impressed with the image, the current is turned off and another section





DR. LANGE'S APPARATUS FOR PHOTOGRAPHING THE STOMACH.

of film is brought into play until the requisite number of pictures have been obtained, then the entire apparatus is withdrawn from the stomach of the patient and the films are carefully developed and enlarged.—*Scientific American*.

Detroit Salon and Exhibition.

THE Detroit Camera Club has issued the prospectus of its third annual salon and exhibition, open to "all artistic workers throughout the world"; but, according to our experience, far too late to warrant the hope that it can possibly be of the international character that the members seem to desire.

There will be two divisions, the Salon, and the General Exhibition; the former consisting only of such pictures as the judges may select from the entire collection; such as in their opinion possess special artistic merit, show *aim* in selecting and lighting, and have some claim to be considered works of true art. The latter, which curiously enough at this time of day, is open only to amateurs, will include photographs of merit, although not sufficiently so to gain admittance to the Salon; technique and "nicety of

manipulation," which in the Salon pictures will be practically disregarded, being allowed for in them.

We regret to see that the organizers of the Salon do not feel themselves strong enough to do without awards, as we know that some of our best workers will not exhibit where they are offered. A grand prize is offered for the most artistic picture in the entire collection, and three diplomas for the three next in merit; and in the Exhibition a diploma for the best photograph, and eight diplomas for the eight photographs next in merit.

An entrance fee of fifty cents will be charged to each exhibitor, and must accompany the entry form, which must be sent in not later than November 11, the exhibition being held from the 25th of that month to December 3, inclusive.

Entry forms and all needful information may be obtained on application to the secretary, Mr. Walter Winckler, 106 Miami avenue, Detroit, Mich.

Difficult Clouds Made Easy.

BY PERCY SHEARD.

A FREQUENT method of obtaining a general impression of a photographic exhibition is to stand in the center of the room, or gallery, and to observe what is the predominating feature. Those who during the last year or two have applied this principle, when visiting our leading "Show," will, in all probability, have observed that the majority of the exhibits owe much of their merit and attractiveness to clouds; in fact, without their harmonious skies many of the best pictures would have been unworthy of being "skied" at a traveling peep-show. It is, however, unnecessary to expatiate upon the advantages of clouds. For the purpose of this article it suffices to accept the hypothesis that they have come and are sure to stay. Also there is no need to more than briefly refer to the usual method of blocking out, or the duster way of inserting clouds, because they are well known and written about in every manual of the most moderate pretensions, so we will proceed quickly. Generally speaking, when our clouds require deep printing, and we have a number of delicate details appearing above the sky line, even the oldest hand would find the successful carrying out of his desire a difficulty, as the extra degree of density added to the obstructive matter would be at once evident. The following practice will, however, enable anybody to insert any desired effect with ease and certainty.

The procedure is as follows: Take your negative, and make from it a positive, and then select a suitable cloud negative (which should be preferably on celluloid). In a printing frame place the cloud film on the top of the positive, and again, on that, a slow plate of any kind that you are in the habit of using. After fastening up the frame, print by gaslight, using your focusing cloth, or a piece of paper, as a rough mask, and keep it moving in the customary manner, so as to avoid any harshness in the horizon line, and develop in the ordinary way. You now have two positives, one of the subject, and another of the sky, which latter will have blank spaces even where the most delicate tracery of foliage, or anything else, juts out beyond the landscape proper.

Nothing now remains but that the photographer should carefully superimpose the cloud positive upon the picture positive in such a manner that the obtruding bits fit exactly into the blanks in the sky positive.

Prior to uniting the two glasses put a few spots of any ordinary mountant on the edges of one of them, so that, when you have got both plates in proper register and placed them on some flat surface, they will dry and adhere sufficiently well to stand any reasonable amount of rough usage.

From this combination it is only necessary to make a negative, which must perforce be done by copying in the camera, seeing the picture is inside the two glasses. This cannot be considered a disadvantage, as any size of negative may naturally be produced, and which will be complete in every sense, and from which any number of prints can be made with an exactness that would be manifestly impossible by any of the ordinary uncertain modes of double printing at present customary.

The idea may not be entirely novel, but, to the best knowledge of the writer, it is not as widely known as it deserves to be. For carbon printing it is an enormous advantage to have one's clouds on the negative, seeing the process is a blind one, and, when working the bromide or any other form of developing process its utility will be at once admitted.—*British Journal of Photography*.

International Photographic Exposition.

(Communicated.)

GR^EAT progress is being made with the mammoth exhibition of photographic apparatus which will be held at Madison Square Garden in October next. Space is rapidly being secured by representative manufacturers, and everything tends to make this, the first exhibition of its kind, one of the most popular exhibitions ever held in New York.

One of the most interesting features of the exhibition will be a very fine historical collection which has been loaned by some of the leading workers in photography on the other side of the Atlantic. A private view of part of this exhibit was held recently at the offices of the Exposition Company, 11 Howard street.

The early literature of photography, which included one of the books exhibited, published in 1761, some seventy years before the discovery of photography, contains a marvelous prophecy of the making of pictures by light, even going so far as to indicate the necessity of a dark room. The title of this book is "Giphantia," or "A View of What Has Passed, What Is Now Passing, and, During the Present Century What Will Pass in the World," in old English, and instantaneous photography is referred to in these words: "The elementary spirits have studied to fix these transient images; they have composed a most subtle matter, very viscous, and proper to harden and dry, by the help of which a picture is made in the twinkle of an eye. They do over with this matter a piece of canvas and hold it before the objects they have a mind to paint. The canvas, by means of the viscous matter, retains the images. This impression of the image is made the first instant they are received on the canvas, which is immediately carried away into some dark place; an hour after, the subtle matter dries, and you have a picture so much the more valuable, as it cannot be imitated by art or damaged by time."

Possibly the most interesting photographic work extant is a large volume known as the "Photographic Album for the Year 1855." This is copiously illustrated with actual photographs, made by the great workers of that day, illustrating the various photographic processes then in vogue. There are forty-four of these photographs, by such workers as Mansell, Rejlander, Bedford and Fenton. These photographs are now forty-four years old, but are in a most excellent state of preservation, and compare more than favorably with the work of to-day.

"Taylor's Photographic Memoranda" is a publication illustrated by actual photographs, and accompanying it are the four original calotype negatives from which the four prints are made.

Three stereoscopic-daguerreotypes, which created a sensation at the exhibition of photographs at the Crystal Palace last year, are on exhibition, and bear out the statement that a stereoscopic-daguerrotype is the most delicate of photography.

The calotype process is exceedingly well represented, some very large calotypes made by Henry Taylor about 1855 being possibly the best specimens extant. Five calotypes of Rye are exceedingly interesting. Another calotype entitled "Pollards at Compton" is contained in an en-

velope made of the same paper as the support of the photograph. This particular paper was the only brand which, by reason of its absolute purity, would serve for the purpose. Other interesting prints are "Stonehenge," "Salisbury Cathedral" and the "House of the Five Gables" at Stratford-on-Avon.

Another remarkable work is Daguerre's "History and Process of Photographic Drawing," published by Daguerre in 1839, containing the bill granting him a pension, Arago's address before the French Academy, announcing the discovery of photography, and the correspondence between Daguerre and Niepce.

The General Aristo Company.

(Communicated)

THE announcements of the Associated Press throughout the country relative to the organization of this great consolidation of paper interests undoubtedly surprised many of the thousands of American Aristo consumers, and have led a large percentage to wonder what the outcome is to be and how it is to affect their personal interest.

Visions of increased prices, arbitrary terms, and indifference to the quality of the goods, which always accompany the popular idea of trusts and combinations, have undoubtedly run riot through the minds of more than one. All such visions will soon be dissipated upon a proper understanding of the facts.

In the first place, the General Aristo Company is not a trust in any sense of the word. It is a company formed which purchases outright the paper business of the Eastman Kodak Company, the American Aristotype Company, the Nepera Chemical Company, the New Jersey Aristotype Company, the Photo Materials Company, and the Kirklands Lithium Company. It is an absolute consolidation under one company and one capitalization. It is not a combination of interests of several individual concerns, handled by promoters who do not understand the business and have no interest at stake except the profit of stock manipulation, but a company which pay down good money for these various companies, and have as much at stake in the proper care of their consumers and in the reputation of their goods as any one of the individual concerns had previous to the consolidation.

As far as monopoly is concerned, no consolidation could have a greater one than the American Aristotype Company have had during the past ten years. This monopoly was not secured through letters patent, or trade

combinations in restraint of trade, or any cinch of any kind. It was secured through the fact of its giving a product of merit at a price that could not be undersold, together with a liberal policy in handling consumers and trade which could not be excelled. It is not flattery, but a fact which the photographic fraternity would cheerfully testify to, that no concern ever existed which gave better value for the money or has expended more for the education and entertainment of the fraternity than the American Aristotype Company. When monopolies come from such conditions they are welcome to the consumers, for the consumers themselves gladly create them. The General Aristo Company propose to secure their business on equal merit, and the American Aristotype Company becomes part of the General Aristo Company.

There will be no increase of price, and the company will not permit any competition to undersell them, quality considered. The General Aristo Company will control for North America the raw paper products of the Rives and Steinbach mills of France and Germany; aside from this their power of purchasing other materials will be greatly enhanced, which will enable them to give better goods and better service for the money than any other photographic concern on either hemisphere.

So far as the American Aristotype Company's plant, of Jamestown, is concerned, there will be no change which can possibly affect the quality of goods. Mr. R. C. Sheldon, who has been the managing superintendent of the works for the past ten years, will continue in the same capacity, together with his entrusted employees, and Mr. Charles S. Abbott, as secretary of the new organization, will also continue to make his headquarters at Jamestown. Similar precautions to preserve the merit of the goods in all other plants of the General Aristo Company will be equally as well safeguarded.

Therefore, consumers will have everything to gain and nothing to lose by the organization of the General Aristo Company.

Notes.

THE SPECTACLE LENS.—For the comfort of those who mourn over the fact that their financial condition will not allow them to become the possessors of the modern and costly lenses, we may say that the negatives from which the beautiful series of lantern slides recently shown at the London Camera Club were printed were taken with a "spectacle eye" of 14 inches' focus. This is still another corroboration of our repeated

statement that, for pictorial work, the focal length is the most important feature of a lens.

THE KROMSKOP.—We understand that this fascinating instrument, hitherto practically neglected in the country of its birth, is about to be exploited for all that it is worth, which is indeed a great deal, as, as we have often said before, it will be a favorite in the home of everyone who can afford it. We understand, further, that Mr. Ives, its ingenious inventor, has very much improved it, so that we shall have lost nothing by waiting.

SECCO-FILMS.—In a previous number we noticed the advent of the "Secco-film," and expressed an opinion to the effect that it was likely to supersede not only celluloid in all its forms, but the glass plate also. That others seem to think so, too, is evident from the fact that the capital stock, \$500,000, of the British company started to make and sell it was all taken up as soon as issued. If it be true that it is absolutely grainless, transparent as glass, without even its trace of green, may be merely flexible or rollable, in cut sizes or on spools, without camphor or other material possible to injuriously affect the emulsion, and, withal, that shall cost less than even glass plates, we may well believe that the demand for it will be enormous, and that the stockholders will have in it a gold mine.

A SIMPLE SENSITIZER.—The following one-solution sensitizer may be applied with a brush or tuft of cotton to almost any kind of material, and will give beautiful prints of colors, depending on its nature or the nature of the size; or the image may be toned with gold or platinum in the ordinary way.

Distilled water	10 parts.
Silver nitrate	3 "
Uranium nitrate	30 "
Absolute alcohol to.....	100 "

Apply the solution with a brush, allow to dry in the dark, which takes about ten minutes. Expose in contact with the negative, and fix by immersion in two or three baths of water acidulated with nitric acid, and then rinse in plain water and dry. It is advisable, if very rich tones are required, to dry in front of the fire or iron with a hot flat iron.

THE ILLINOIS COLLEGE OF PHOTOGRAPHY.—We understand that the students attending this college have become numerous enough to be of considerable importance in the eyes of the Effingham boarding house keepers; so much so indeed that most of the boarding-houses are being supplied with dark rooms in which the students may put into practice the lessons taught in the college.

VICOL.—A new color process has been for some time in the "air" among British photographers; not the usual photography in the colors of nature, or in natural colors, but a method by which every man was to be his own colorist, and that with only two colorless solutions. The following specification from the British Patent Office, granted to T. T. Baker and M. S. Berger, will show something of the size of the animal brought forth by the mountain: "Add litmus, in preference powdered litmus, to water in proportion of about 1 ounce of litmus to about 6 ounces of water, then boil the mixture until the litmus is dissolved. When cold, filter the solution of litmus and mix it with the sensitive emulsion or solution in the proportion of about 40 parts of the litmus solution to 60 parts of the sensitive emulsion or solution, the depths of the tints subsequently obtained varying with the proportion of the litmus solution to the sensitive emulsion or solution. Apply by means of a roller or other convenient method the mixture of litmus solution and sensitive emulsion or solution to the surface of the material to be coated with it, thereby making a photographic printing surface on which photographs can be printed and finished off in the usual manner. Apply to the whole or any part of the surface of the printed photograph, with a camel's-hair brush or other suitable means, an acid or acid substance, by preference a 5 per cent. solution of citric acid, when a red or pink tint will be produced; or apply in like manner an alkali or alkaline substance, by preference a 5 per cent. solution of caustic soda, when a blue tint will be produced."

Words from the Watch Tower.

BY WATCHMAN.

WHAT is a hand camera? I had thought this settled long ago, but it would seem that there is still room for a difference of opinion. *The Amateur Photographer* offered certain prizes for the best hand camera work, and on the appearance of the prize pictures in the journal several correspondents questioned the justice of the award on the ground that they bore external evidence of being time exposures, up even to the length of five seconds. The editor defends the judgment in a paragraph of a third of a column, the gist of the matter being that "hand camera," like many other terms, must be taken with a liberal meaning, and that it is impossible to draw the line between prints which may and may not be admitted, solely on the ground of length of exposure. So far he is right,

but only so far as includes *shutter* exposures. A hand camera is a hand camera whether it be held in the hand or placed on a tripod; but it is surely unfair to compare two prints taken under those very different conditions. The correspondents and not the editor have the right sow by the tail; work taken by a hand camera held in hand is hand camera work, but work by a hand or any other kind of camera placed on a stand is stand camera work. That at least is my idea of the subject.

* * *

The reports of the sayings and doings at some of the State conventions are sometimes amusing if not very instructive. Here is a sample that occurs in a report of that recently held in St. Louis:

"Mr. Rosch offered to answer any questions which might be asked. Inquiry was made as to whether Mr. Rosch had had any trouble with sulphide of soda. He replied: 'I have had no trouble since the invention of the thermometer test. I suggest at all times that you test it. Do not weigh it, but test it. I do not think it is necessary to test it in alkali!'"

I had thought that he must be a very young tyro who did not know how to restrain the development of an over-exposed plate, but learn from the very next sentence of the report in question that there was at least one professional photographer who did not know, unless it be that the reporter had a grudge against the craft. This, at least, is what he makes them say: "Mr. Bischoff: 'Have you ever found any method of restraining the development in a case of a little over time?' Mr. Rosch: 'My experience in a plate over timed would be to use a very slight portion of bromide of potassium. The old remedy I still find the best. But I wish to state that if you give it an overdose of bromide you do one of the most pernicious things possible.'"

* * *

I see that a contemporary is cautioning the fraternity against a German of good address, and giving his address at a prominent stock house in New York, who has been victimizing photographers by selling them so-called formulæ. It takes two to make a bargain, and the photographer who does not read the journals enough to make him proof against the process monger deserves to be victimized without sympathy.

* * *

Honor to whom honor is due is a good motto, and one that should be observed in small as well as great matters. The discovery that soluble organic matter became insoluble when exposed to light in conjunction with an alkaline bichromate seemed a small matter, but it, and it alone,

made possible all that is included under "process work, carbon printing," etc. On page 391 of *Wilson's Magazine* for September this important discovery is credited to Poitevin, who was probably the first to apply it to carbon printing, but he learned it from Mungo Pontin, who brought it before the Royal Scottish Society of Arts as early as 1839, the birth year of photography itself.

* * *

In the same number, in an article on "A South Light Studio," the writer recommends something that he has evidently not tried, and which would bring whoever does so to grief. As a means of matting the glass on which direct sunlight falls he says: "Perhaps the best way is to take sheets of tissue paper, cut to the exact size of the pane of glass, soak the paper in raw linseed oil and mount it carefully on the glass. This is not difficult for anyone used to mounting prints, for the oil tends to toughen the paper. Use a squeegee, working from the center, and squeezing out all superfluous oil. Wipe the oil off with a clean rag and work the squeegee until there are no air bubbles left between paper and glass. There is only one secret in this, and that is to have the glass quite clean. The window if properly done will have the appearance of very fine ground glass. There is no fear of discoloring, as sunlight bleaches the oil." It is true that under suitable conditions oil may be, and indeed is, bleached by exposure to sunlight, but the photographer who thus attempts to matt his light will find that there are conditions under which linseed oil in presence of other organic matter undergoes oxidation and very considerable darkening, and that he has provided them.

Our Portfolio.

Communications for the editors, pictures for criticism, and apparatus and material for examination, should be sent to DR. JOHN NICOL, *Tioga Centre, N. Y.*

544. GEO. R. BOSWORTH.—"Man at the Forge" is well enough arranged, and only needed sufficient exposure to be a good "reproduction of fact." The anvil, which may be taken as typical of every other object in the "smithy," is shown only in outline, the top and side being white paper, and all the rest simply black. The exposure should have been long enough to give *some* detail in the shadows. Had this kind of lighting been the object it could have been better, indeed properly accomplished, by a flash in the fire-place.

545. F. R. ARCHIBALD.—"Rogue," a child with a thoroughly roguish expression, has only one serious fault, under exposure; but that has been to such an extent

as to represent the dress by white paper without a trace of shade. A lens of twice the rapidity, or an exposure twice as long, would have made this a little gem.

546. DR. W. J. FURNESS.—“On the Towpath” makes us wish that the hand camera had never been invented, or that we were the despot of a despotic nation and could command that only such a lens as the planar, with a working aperture of about $f/3$, should be employed in such.

This is a beautiful subject, that apparently could not be better arranged. The view is along a canal with rich foliage covered banks, a winding tow-path, and approaching boat towed by a white horse in real living action, and although truer in values than almost any hand camera print that we have seen, is yet so far off as to make us wish that a lens of at least twice the rapidity had been employed. In spite of the fact that the much too short exposure has resulted in the lighted portions of the water and cloudless parts of the sky being represented by white, and the shadows by simple black, we shall reproduce it; and may add that a great improvement could have been effected by, just before exposure, disturbing the water so as to give beautiful shadows, instead of objectionable reflections.

547. W. H. WILLIAMS.—“The Pride of the Dairy”; a sylvan scene, with three fine but not very well posed cows as its *motif* or objective point, is not so effective as it might have been. The sky line too nearly repeats the top and bottom margins; that is, it is too straight, a horizontal line, and a little more patient waiting might have secured a better grouping of the cattle. Then, in consequence of under exposure, the foreground is considerably darker than it should have been under such a brilliant sky, and for the same reason, a large tree, a prominent object, is, in both trunk and foliage, simply black paper. Local development might have remedied this, or even masking during printing, but only longer exposure and suitable development could have given the necessary contrast and sunny effect to the foreground. We should have made it an upright, and so got a larger proportion of sky.

548. GRACE MOUNTS.—“One of the Unemployed” is quite refreshing, coming as it does among such a quantity of worthless snap-shots. A ragged boy, seated on a doorstep, is in every respect save one, arranged just as it should be. The mistake was to let him look at the camera, and so give an appearance of being posed. You should have made him bend the head, looking toward the knee, and so conveyed an idea of sadness or misery, or even hunger, and it would have been one of the gems of the year. The values are so nearly true that we hesitate to suggest an improvement, but a little, just a little longer exposure would have been an improvement. You are on the right road to a high place, and will do much to show that photography is entitled to rank as a method of producing works of fine art. See page 413.

549. MARIE M. TAPPING.—“Rest.” In this you have made the mistake of trying to combine two phases of photography that are different, and require different treatment, a figure study and an interior, and you have done justice to neither. For a figure subject, which your title suggests as the object, the table and stool should have been discarded, and a reflector employed on the sitter's left, to secure a more suitable lighting. The camera should have been nearer, and much of the distracting and useless matter on both right and left excluded. For an interior, the figure had better been left out, and a much longer exposure given, three or four times as long, as everything not directly lighted is simply black.

550. G. W. DUNBAR.—“What Shall I Write?” A child at a table with, presumably, paper before it, and about to write, is good in design, but spoiled by under exposure. Table, arms and dress are all alike white paper. Twice or thrice as long was necessary to make anything worth looking at.

551. A. G. GRAFF.—“A Bit of Kentucky” is a good subject from a bad point of view. It may be taken for granted that a road should never be close to the margin of the picture, far less, as this is, cut in two by it. It is also considerably under exposed. See Answers to Correspondents.

552. JOHN A. GLASSEY.—“A Six O’Clock Hustle,” although a hackneyed subject, is well arranged, except that the figures on top of the hay are somewhat lost in the tree behind. The exposure has been much too short, the shadows being black as midnight, and the sky white paper. Such snapping is simply a waste of material. An exposure of at least thrice as long was necessary.

553. HELEN L. GRISWOLD.—“Evening in the Hills.” Several sheep in the foreground, trees in the middle distance, and under the distant sky line the luminous glow left by the setting sun, leading up to the finely clouded sky makes an effective and suggestive picture that is much improved by trimming off half an inch from the foreground. We have complimented you before, and said then what we say now, you should get a larger camera and a lens of long focus; your work will be worth it.

554. I. S. HAYNES.—“The Old Mill” is faulty, both in selection and execution. The tree trunks in the foreground form an objectionable series of parallel lines, altogether inimical to pictorial effect, and the exposure has been so short as to leave everything on which direct light did not fall simply black. Study some work on composition and expose at least thrice as long.

555. E. B. ESCOTT.—“In Watkins’ Glen” is a well known and frequently photographed part of this famous glen, but, as a photograph, utterly worthless from under exposure. Five or six times as long was necessary.

556. A. DIXON.—“The Log Cabin.” A part of a dilapidated log cabin with a number of figures evidently standing and sitting to be photographed, was not of sufficient interest to be worth photographing. It should have been on a smaller scale, so as to admit of its surroundings being included, and it should have got a much longer exposure. The lights in the original were not nearly so white nor the darks nearly so dark.

557. W. M. WILLIAMS.—“The Ruined Castle.” We reproduce this as an object lesson, as it is one of those pictures that makes us wonder why one who can do so well does not do better. In it we have almost all the qualities essential to a good picture, simplicity, contrast, balance, and fairly good perspective, although a lens of still longer focus would have been better; but the values are not true. With light enough to produce cast shadows the tree trunks are almost black, the stones on the shady side of the tower are literally as black as the “loopholes,” snow white roadway is cut up into many ruts, each as black as the blackest trees, and the sky, except where there is a faint indication of a cloud, is simply white paper. The fault is under exposure, but in this case the remedy should have been the employment of a larger stop, with the same exposure, which would not only have given truer values, but also the lacking *atmosphere*.

558. E. A. WHEATLEY.—“Still Waters” is a fine subject, photographed so as to

convey "the shades of evening" impression remarkably well, and the impression is intensified by the green in which it is printed. With, say, double the exposure, and printed in a warm tone, or "Bartolozzi" red, it would have been an equally fine, or even better "sunny scene." We shall have pleasure in reproducing.

559. F. C. BOKER.—"In the Surf" is a pretty little photograph, one of the few, very few snap-shots that are really worth printing. We shall make an initial of it with pleasure.

560. WALTER H. DORE.—The print is of no pictorial or indeed any other interest, and as a mere reproduction of fact it required a much longer exposure. The lights only are depicted, the shadows being perfectly black; you should remember the good old rule: "Expose for the shadows, and let the lights take care of themselves."

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tlaga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

AMERICAN LANTERN SLIDE INTERCHANGE.

The general manager sent out his call for new sets of slides on September 15, for the 1899-1900. season, and among other things stated that the Board of Managers in June last voted to rescind the vote adopted in 1898, whereby slides were sent around the Interchange without selection. It was voted to return to the old rules, which enable the selecting committee to throw out poor slides technically. This action was not taken without due consideration and some ground of complaint. Each lantern slide director is called upon to furnish a new set of slides, not less than fifty nor more than 125, by November 15 next. The communication then contains the following useful suggestions: "In preparing the set, first see that every slide is technically perfect as far as possible; that it is properly labeled, having the name of the club on the descriptive label and the thumb label numbered in lead pencil on the lower left hand corner as you look at the slide when the picture is in its natural position; that the mats are true and regular, with smooth edges. Also avoid selecting sooty slides, those in which the blacks are overdense, so much so as to obscure details in the shadows while the high lights are blank without detail. Such slides are the result of short exposure and prolonged development. On the other hand be careful not to put in the set slides that are weak or flat, due to over-exposure, for they lack gradation. Such slides may be improved by slight intensification. To avoid hardness, one plan is to fully expose the plate, then over develop until it becomes quite opaque, then after fixing, immerse in a reducing solution of persulphate of ammonia, until the desired quality is obtained. This method clears the shadows and preserve the details in the high lights. In making a selection secure as much variety of subjects as possible, unless there is some one theme to be illustrated. Cloud effects are always interesting, and landscapes with cloud skies

are to be preferred to those that are blank. The list accompanying the set should contain descriptive notes, where possible, of historical or special slides."

The resignation of Mr. George Timmins, of Syracuse, N. Y., from the Board of Managers is spoken of, much to the regret of all. Mr. Herbert F. Smith, of the same club, was appointed in his place. Mr. Timmins kindly loaned the Interchange during the past season a choice collection of slides, which he had purchased from different prominent amateurs and others. The set has been nearly through the rounds of the Interchange, and has been greatly enjoyed wherever shown.

Several new clubs are making preparations to enter the Interchange this season, which promises to be one of the best. The requirements for joining are that each club shall send a set of fifty selected slides and remit an entrance fee of \$10. The set is examined and if the percentage is above the average the club is admitted; if otherwise entrance is deferred until the quality is improved. It is probable an English or French set will be in circulation during the coming season.

Clubs or others desiring information should address F. C. Beach, General Manager, 361 Broadway, New York.

THE CAMERA CLUB OF NEW YORK.

Notices were sent out for a meeting of the club on the evening of September 12, but as the president and vice-president were absent and the attendance was small it was passed over. The "Members' Exhibition" prints have hung on the wall all summer, and it is a very creditable display. About fifty-seven members are represented. During the summer five new members have been elected and in the way of improvements Welsbach incandescent gas lights have been put up in place of electric lights in the locker section of the rooms.

The chairman of the Print Committee has arranged for seven one-man print exhibitions, each to run a month, from October, 1899 to April, 1900, inclusive, some new names being in the list.

It is supposed an effort will be made this season to prepare a set of slides for the American Lantern Slide Interchange, though no official action has as yet been taken.

PORTLAND (MAINE) CAMERA CLUB.

This new club, organized in May last, now announces that it will hold its initial Salon in November next, for the purpose of bringing together for exhibition and study the best work of amateur photographers in the State of Maine. Not more than ten prints may be sent suitably mounted. All will be exhibited and be examined by competent judges, who will in some way designate those of especial merit. No prizes are offered. The exhibitor's name and address must be plainly written on the back of each photograph. All pictures must be sent to the Portland Camera Club, 5 Temple street, Portland, Me., on or before October 25, 1899. The new club is to be commended for its energy in getting up an exhibition so soon. The officers are: President, George F. Gould; vice-president, N. W. Edson; secretary, Edgar R. Dow; treasurer, J. Harry Lamson.

Our Prize Slides.—This choice and valuable collection of slides is still available for the use of clubs and subscribers. Send applications to F. C. Beach, 361 Broadway, New York.

Our Artistic Print Exhibit.—Consists of about forty fine photographs (8 x 10) mounted on stiff cardboard. The box of prints is now located near Chicago, Ill., and can be had by any club desiring to help out or supplement its exhibition. Write to F. C. Beach, 361 Broadway, New York, when wanted.

Our Table.

MODERN PHOTOGRAPHY IN THEORY AND PRACTICE, by Henry G. Abbott. *Chicago: George K. Haslitt & Co.*

Hand books of photography are now so plentiful that a new candidate for public favor can only hope to succeed by having something new to tell, or by telling the old story in a different and better way, and we may say at once that this **has** not the one, and does not do the other. Its title is also a mistake, in so far as it claims to deal with the *theory* of photography, as that is referred to in only one paragraph, when dealing with development, on page 76, where it is said that: "The use of the alkali in all developers is to open up the pores of the gelatine to permit the developer to get at the silver salts," a statement in which the author is about as near the truth as if he had said it was to convert the film into green cheese.

While highly appreciating the hand camera in the hands of the experienced photographer who knows its limitations, we have often said, and here say again, that that experience and knowledge can only be gained through the use of the stand camera, and that to expect to acquire a knowledge of photography by the use of the hand camera is as foolish as would be the study of the higher mathematics without the multiplication table. Our readers will therefore understand why we say that the book is an unsuitable guide to the beginner when we say that its practical instruction in exposure and development begins and ends with only two "snap-shots," one of 1-50, and one of 1-10 of a second.

Anxious to deal justly with "Modern Photography," we have taken five ordinary but less pretentious hand books and compared the instruction given on most of the principal operations involved in picture making, both as regards quantity and quality, and while on the whole, in its practical instruction, it is quite as correct as any, in no case is it so full, in many cases not so satisfactory, and in some positively misleading. For example, it is now generally recognized that for pictorial work the most important feature of a lens is its focal length; but the beginner who trusts to "Modern Photography" is told to "never mind about the angle of your lens, or its focal length," and when he wants to know what he is to understand by "a lens of the fixed focus type," he is told that "by a fixed focus is meant that the lens is of the single achromatic type, so that no matter whether you are taking a picture six feet or 500 feet away, it will be in focus just the same."

For these, and other reasons, we regret that we cannot recommend "Modern Photography" as a guide to the beginner, but there is much in it that will be of use to those who are more advanced. Hints as to the treatment of the various printing papers on the market; well selected formulæ for almost all operations; faults and how to cure them, etc., and some really good pictures, not by way of illustration, as they are not anywhere referred to, but as embellishments, and object lessons.

AGFA.—We have received from the *Actien-Gesellschaft für Anilin-Fabrikation* a bottle of this new one-solution intensifier, and having put it to the test of considerable practical use, have pleasure in saying that it will be found an invaluable addition to the photographer's *materia photographica*.

It is a colorless solution, of such a strength that one part diluted with nine parts of water requires only three or four minutes to produce an average intensification. The concentrated solution will keep indefinitely, as will also the diluted, and the latter may be used over and over again till exhausted.

As intensification is produced by one operation, and the action is gradual and cumulative, any degree can be obtained, and that over the whole plate, or locally by application with a brush. Indeed, this latter we regard as its most valuable property, as there are few negatives that may not be improved by local treatment.

In Agfa we have found the very thing that we have long looked for, for lantern slides. We like to develop them to full detail and gradation, but on the thin or weak side, and after clearing, when that is necessary, finish by giving the desired intensity, and for this purpose it answers better than anything hitherto tried. Agfa is an ideal intensifier.

Letters to the Editors.

LENS RAPIDITY.

DEAR SIR: Not long since I took exception to a statement of a writer in one of the photographic magazines to the effect that he had taken a picture with a "specially fast lens" with the $f/128$ stop in 1-100 second, he asserting that the feat was entirely due to the superior speed of his lens. In mentioning the matter to a friend of mine who ought to know all about such things I was called down most emphatically, and told that in taking the position that the modern and most highly corrected lenses were no faster with a given stop than some of the old and ordinary R. R. lenses I was in danger of making a fool of myself. A day or so after receiving this reply I was called upon by another friend to pass upon Mr. Trego's article on the Wynne's exposure meter in the 1899 *Times Almanac*, in which he (Mr. Trego) asserted that the Wynne's meter was unreliable because of the difference in the speed of lenses, the speed of the Cramer medium isochromatic plate being marked as $f/56$ on the speed card, while with his lens, which was much more rapid than many others, the correct speed of the said plates was $f/200$. Had I not been warned by my first mentioned friend I should have expressed my opinion of Mr. Trego's position in a very few and pointed words, but with such an authority against me I merely said he was mistaken and asked for time in which to frame an opinion.

My first named correspondent said that the feat of $f/128$ and 1-100 second had been performed with a Dallmeyer lens.

The matter is of considerable importance to me, and as I rely for my position almost entirely upon your statement in the December, 1898, *AMERICAN AMATEUR PHOTOGRAPHER*, pp. 555, 556, I feel that you are the person to set me right. In the paragraph referred to (it deals with the Wilson controversy), you say, "under equal conditions (focal length, stop, subject, light, development, etc.) the single

lens is more rapid than the modern anastigmat." Upon the strength of this paragraph, which came to my eyes early in my photographic career, I have always asserted that the Goerz and other improved lenses were no faster with a given stop than my ordinary doublet. The question is, am I right or wrong?

This raises another question about which I have never seen any clear statement, and that is whether the actual diameter of the stop rated as $f/8$, say, with a single lens, is the same as the $f/8$ stop with a doublet, both lenses being of exactly the same focal length, or in other words, whether a stop is numbered according to its actual diameter or according to the diameter of the aperture of the lens with the stop in position.

Yours, etc.,

ENQUIRER

[We willingly insert this letter, as it gives us the opportunity of again replying to questions that we thought had been settled once for all, but which come up again and again.

It is true that theoretically glass absorbs light, and reflecting surfaces reflect it, and therefore the thinner the glass and the fewer of these surfaces the more rapid will be the lens. But practically that absorption and that reflection are so infinitesimal as to be disregarded in considering the relative rapidity of lenses.

The relative rapidity of all lenses depends entirely on the relation that the working aperture or stop bears to the focal length of the lens; $f/8$, $f/16$ and $f/22$, for example, are respectively the 1-8, 1-16 and 1-22 of that focal length, and whether single, as the old landscape lens, double, as the rectilinear, or of the more recently introduced anastigmat type, or whether of long or short focus, the rapidity of each with the same stop, that is, with a stop of the same relation to its focal length, and under similar conditions, will be the same as that of all the others.

But there is a sense in which certain lenses are more rapid than others. The rectilinear is more rapid than the single lens, because the largest working aperture of the latter is $f/16$, while that of the former is $f/8$, and hence four times faster. The anastigmat at $f/5-6$ is twice as fast as the rectilinear, while the portrait lens at $f/4$ is twice as fast as the anastigmat; but when stopped down to the same f value, say to $f/16$, or any other size, they have all practically the same rapidity. From this it will be evident that you were right, and your friends, including the author of the article in the *Times* Almanac, were altogether wrong.—Ens.]

A CAMERA FREAK.

DEAR SIR: Perhaps the readers of the camera page will be interested in the story that I am going to tell. I will give the facts in the case, just as they happened, and leave the reader to try and explain the mystery, and by the way, there are several witnesses of the wonderful phenomenon that took place.

I was at the house of a friend to take a baby's photo, and the servant who had charge of the child held it in her lap, being seated in a chair which I made sure was completely covered, as I did not wish it shown in the picture. I had placed my sitter in the direct rays of the sun that was streaming through the window, for I intended to give just as short time exposure as possible, for fear that the child would move.

Well, I made the exposure, giving it one-third of a second, and supposed I had secured a good plate, as the child did not move during the time of exposure.

I took the plate home and started to develop it, and now the queer part comes in. Instead of the woman and child I expected to see on my plate, behold I sat looking at the empty chair with just the bare outline of the woman's dress clinging to it, the chair perfectly plain, even to the seat, which was cane, and also the shadow that it cast on the floor, showing the net-work of the seat even plainer than the seat of the chair itself. I rubbed my eyes and looked again, pinched myself to see if I was asleep, but no; there stood the chair as plain as day, with the sun's rays still streaming across it as when I took it, and nothing could be seen of the girl and baby. Well, I set the plate one side and went on developing my other plates, which were all right, but I could not seem to drive some curious thoughts out of my head. I thought about it long after I had retired, but could not arrive at any definite conclusion of the strange freak that my camera had played upon me. I may say here that I have taken three or four hundred pictures, and this is the first of its kind I have ever seen. Well, the next morning I thought so much about it and the strangeness of it all, and at the same time so positive as to making my exposure correctly, that I determined to try and finish development of that plate, even at that late date, which I did and which explains why the picture is not as good as it would otherwise have been. Now I know you will say that it is a hard story to believe, but as I have positive proof I don't know what we can say in regard to it. Can anyone explain it? I should be very glad if some one of my many camera friends would give their opinions upon the subject. I have given it up as a hard nut to crack.

Yours, etc.,

WEBSTER W. BOLTON.

Howard street, Easton, Mass.

[We prefer to let our correspondent's statement stand as it is, and shall be glad to hear what some of our readers have to say about it. The photograph accompanying the letter is too faint for reproduction, but the empty chair just as he describes it, and its shadow, cast on the wall behind, is unmistakably there. We shall send it to our publishing office, where those who think they may be able to solve the mystery and care to call, will see it.—Eds.]

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander Davis), Washington, D. C., from whom copies of patents may be had.]

AUGUST C. T. GROSS, Philadelphia, Pa.

Photograph Mounting. No. 630,215.

The mat is cut out and the print is mounted on the back. A flap having an adhesive layer around its edges is provided, and is pasted down over the edges of the print, which project beyond the edges of the opening in the mat and secure the print to the mat.

JOHN K. GRAEME, Washington, D. C.

Developing Apparatus. No. 630,500.

A nest of three boxes is provided. In the outer box and in the innermost box ice is placed. In the intermediate box, between the outer and the inner box, the developer is placed. The innermost box is supported above the bottom of the innermost box, so that the film may be passed under it and up on either side of it.

HENRY BATS, Wolverhampton, England.

Regulator for Shutters. No. 630,644.

In a pneumatic shutter apparatus, an adjustable air valve is provided adjacent the rubber bulb, whereby the shutter will be permitted to close after a predetermined time.

NELS BOUVANG, Rockford, Ill.

Magazine Plate Holder. No. 630,849.

A rigid plate-holding box open at one side and provided with a spring to feed the plates to said open side, is provided with a collapsible side extension in which is secured a hook for engaging the edge of one of the plate-holders. By grasping the outer end of the extension the hook may be manipulated to remove the exposed plate from the front to the back of the magazine.

WM. F. FOLMER, New York, assignor to the Folmer & Schwing Manufacturing Company.

Magazine Plate Holder. No. 631,249.

This device is of the same class as that described in patent 630,849, the invention relating to the details of construction.

JOHN A. MOSHER, Chicago, Ill., assignor to Adams & Westlake Co.

Magazine Camera. No. 631,963.

The box is provided with a rack on which the plate holders are supported, and a spring presses said holders one by one into the focal plane. Trunions are formed on the ends of each holder, and those on the forward holder are engaged by a pair of swing arms, which, when manipulated, remove the exposed plate to the bottom of the box and permit the next plate to be pressed into focal plane.

DAVID ROBERTS, Pittsburg, Pa.

Tripod. No. 632,064.

The legs of the tripod are formed of hollow telescoping sections and the lower ends of the upper sections are made small to frictionally engage the enlarged upper ends of the sections sliding therein. When the legs are extended this frictional engagement holds the sections in an extended position.

WM. H. LEWIS, Huntington, N. Y., assignor of one-half to E. & H. T. Anthony & Co.

Developing Tray. No. 632,220.

The tray is formed with a slot in one or more of its sides above the bottom, and a negative lifting device made of a piece of metal bent at reverse angles is provided. One end of this device is adapted to pass through the slot and the other to rest flat on the bottom of the tray under the plate.

FREDERIC E. IVES, Philadelphia, Pa.

Camera. No. 632,573.

Back of the lens, within the box, a reflecting device is provided whereby three images of the object to be photographed are made. Three sensitized plates are supported to receive these images, and a color-screen is provided for each plate.

JOHN N. CHOATE, Carlisle, Pa.

Retouching Frame. No. 632,643.

The frame is provided with clamps whereby it may be rigidly secured to a table. On the frame is mounted a negative clamp, and electric mechanism is

provided for imparting to said clamp and the negative therein a slight rapid vibration.

JOHN N. GOLDBORG, Hopkins, Minn.

Photograph Holder. No. 632,649.

Within an octagonal case formed with transparent sides is mounted a series of concentric rotatable picture receiving cylinders, the smaller of which are mounted within the larger. The outer cylinders are provided with a transparent panel through which the inner pictures may be viewed, and the cylinders may be rotated independently or simultaneously.

ACTIEN-GESELLSCHAFT FUR ANILIN FABRIKATION, Berlin, Germany.

Photographic Developers. Trade Mark No. 33,417.

The word "Eikonal." Used since July 3, 1899.

ACTIEN-GESELLSCHAFT FUR ANILIN FABRIKATION, Berlin, Germany

Photographic Developers. Trade Mark No. 33,418.

The word "Imogen." Used since December 2, 1897.

HALLER-KEMPER COMPANY, Chicago, Ill.

Sensitized Paper. Trade Mark No. 33,409.

The word "Kruxo." Used since April 1, 1899.

Answers to Correspondents.

[Correspondents are requested to notice that communications intended for the editors, from July 1st to September 15th, should be addressed to DR. JOHN NICOL, Point o' Woods, N. Y., where he will, as usual, give instruction in the theory and practice of photography. After September 15th to Tioga Centre, as usual.]

A. G. GRAFF.—Your lens of $6\frac{1}{2}$ inches should not, for pictorial purposes, be employed on a plate larger than "quarter," $3\frac{1}{4} \times 4\frac{1}{4}$. The telephoto lens is not so suitable for general work as an ordinary rectilinear, or, if for landscape purposes, a single lens. For 5×7 plates the lens must not be shorter than $10\frac{1}{2}$, and 14 inches is very much better. It is true that Dallmeyer, some time ago, stated that the length should be at least equal to the diagonal of the plate; but he was speaking more from an optical than a pictorial point of view, and his father before him, long ago, asserted that the lens should be twice the length of the longest way of the plate.

P. FOOT.—The ferrous oxalate solution employed for blackening after mercury in intensification is the ordinary ferrous oxalate developer. We cannot spare room in this column for formulæ that can be found in any hand book, or in our back numbers. See Contribution Box.

PICKARTS AND NICODEMUS.—At the time of writing the Secco film had not found its way to this country, but it is sure to be advertised as soon as it does.

MYRA SOMMERS.—Running water not being available your best method will be to get two deep trays, say 10×8 , porcelain does admirably, fill them with water and place the prints in one of them one by one as you remove them from the fixing solution. When they are all in transfer them one by one, beginning at

the bottom, to the second tray. Repeat the transferring from tray to tray till they have got eight or ten changes, and you may rely on the washing being sufficient.

G. R. BUSCH.—The powdery appearance on the negative is the result of adding alum to the fixing solution. Plate makers generally now know how to make plates that do not require alum, but when you have some that do, never add it to the fixing solution. Place them in a separate solution of alum, either before or after fixing, and be sure you rinse them well after the alum and before the hypo, or after the hypo and before the alum.

E. B. SCOTT.—The asphalt backing is effectual, but too troublesome, as you have found. Several formulæ, all of which are good, will be found in our back numbers, but none better than what you are using, caramel, lampblack, alcohol and water. The addition of a little dextrine will prevent its rubbing off.

R. S.—The simplest way to vignette the lower part of the figure is to paste a piece of opaque paper over the lower part of the printing frame, outside of course, and a little higher than the desired line. Cut this to something like the desired shape and separate it from the glass by a little cotton.

If the photograph is unmounted, or if you can remove it from the mount, the method of making a negative from it given on page 342 of our August number will answer admirably, indeed, better than any other. If it is mounted and may not be removed from the mount, it may be copied in the camera in the ordinary way. The supplementary lens to which you allude merely shortens the focus of the ordinary lens, a result which may be equally well done by a strong magnifying spectacle "eye" which may be bought for a few cents. See article on the subject on page 293 of our July number for how to employ plano-concave lenses to lengthen the focus and plano-convex lenses in the same way to shorten it.

W. Z. DAVIS.—The tribasic sodium phosphate, although recommended by Lumiere, has not come into general use, as it seems to possess no advantage over the alkaline carbonates. We are too far from home to look up the information you require, and have not time to ascertain by experiment. Your letter having been sent to Tioga Centre, instead of Point o' Woods, did not reach us in time for reply in the September number.

M. H. S., PITTSBURG.—We hardly care to advise you, as 99 per cent. of hand camera work is not worth serious consideration, and under exposure is only one of its faults. The best of those on the market are fitted with R. R. lenses, with an aperture of $f/8$, and their speed is practically alike. One of the anastigmats at $f/5$ would be twice as fast, and a planar, at about $f/3.50$ would be five times. For your purpose, and for plates or films of $3\frac{1}{2}$ in. square we would recommend a six inch planar, and have no doubt that either of the firms you mention would make a camera to suit, and fix the lens for parallel rays, which is what is meant by "fixed focus." We warn you, however, that it will be an expensive business, something not far short of a hundred dollars.

Notwithstanding the fact that on at least two different pages of the July, August and September numbers, correspondents were requested to send their communications, during July and August, and till the 10th of September, to Point o' Woods, N. Y., on our return we found a bushel basket full of mail matter, among it many prints for criticism and matter to be otherwise noticed, all of which must now wait its turn, and some of which cannot be reached for several months.

SALE AND EXCHANGE.

[This department is for the benefit of SUBSCRIBERS who have photographic material, apparatus or books which they wish to exchange, and such wants will be inserted free of charge one time. For each additional insertion we will charge one dollar per month. Dealers advertising in these columns will be charged double our ordinary advertising rates.]

Wanted.—A good Long focus, 5x7 or 6½x8½ camera with lens and shutter, holders, etc. State what you have; add full particulars with lowest price. W. A. Allison, 4034 N. 23d street, St. Louis, Mo.

A Rare Chance.—For sale the following: One Colt's Criterion Lantern No. 375, with Oxy.-Hyd. No. 20 lime jet and No. 15 Criterion oil lamp; half size objectives; rapid slide changer; tinting box; pair 35 foot iron gas tanks with valves, pressure gauge, etc.; one 7 foot and one 9 foot screen on spring rollers, and one 12 foot regular screen, electric signal, etc. All in A 1 condition. Will sell in one lot or will divide up. Write for further particulars and prices, which will surprise you. J. B. Barlow, Grand Rapids, Mich.

Wanted.—Some one to form a club of subscribers to this Journal. A Gundlach 5x7 camera with good lens given as premium. Write for particulars. Address THE AMERICAN AMATEUR PHOTOGRAPHER, 239 Fifth avenue, New York.

Wanted to Exchange.—A Ricca mandolin in fine condition, cost \$25, for Eastman Bullet or Bull's Eye Special Camera. Address Lock Box 44, Crafton, Pa.

Will pay \$1.50 a dozen for use of photos of scenery, animals, etc., in illustrated paper; credit given; originals returned if desired. Send finished, unmounted prints to Wheatley Co., Temple Court, New York. (Refer publishers A. A. P.)

For Sale.—Turner-Reich Anastigmat lens, with Bausch & Lomb shutter, 6½x8½, 10½ inch focus, good as new; used only a short time. Cost, \$90; will take \$65. J. G. Stoerr, 3125 Portland avenue, Louisville, Ky.

For Sale.—One No. 4 5x7, Series II., Steinheil Patent Antiplanetic Group lens, with Prosch shutter, cost, \$58.50, for \$42. One No. 5 5x8, Series III., Bausch & Lomb Zeiss Anastigmat lens, cost, \$52.50, for \$38. Either or both of them sent with privilege of examination. William C. Jupp, 50 West Larned street, Detroit, Mich.

For Sale or Exchange.—A lens for a 5x8 or a 5x7 view camera; price, \$3. E. W. Lotze, care Camera Club, Photographic Society of Natural History, Cincinnati, O.

For Sale.—One Zeiss Convertible VII. A lens No. 16. Special construction. Speed f/5.6. Cost price, with shutter, \$164.50; will sell for \$125 cash. Both lens and shutter in perfect condition. Henry Stark, 3311 Missouri ave., St. Louis, Mo.

For Sale or Exchange.—One 14 inch focus "Ross Rapid Symmetrical" lens (good as new and a fine lens). Iris diaphragm. Will sell on three days trial for \$40, or trade for Zeiss No. 11 VII. A lens and pay difference in cash. C. E. Soderstrom, Box 193, Holdrege, Neb.

A Bargain.—One 5x8 camera and lens; telescope carrying case; three double plate holders; one tripod; one printing frame; two trays; one 4 ounce graduate measure; one focusing cloth; one ruby light; one trimmer; one glass form. Will sell the outfit for \$10. R. H. Clark, Holbrook, Ariz.

For Sale.—A 6½x8½ Zeiss lens, series 3, fitted with a Bausch & Lomb diaphragm shutter, cost price \$80.00; will sell for \$60.00; this lens is in perfect order. A 5x7 Tele Photo Poco with six plate holders, without lens and shutter, cost price \$33.00, will sell for \$26.00. A 6½x8½ Tele-Photo Poco with six plate holders, without lens or shutter, cost price \$41.25, will sell for \$33.00. A 8x10 Tele-Photo Poco with three plate holders, without lens or shutter, cost price \$43.00, will sell for \$33.00. These cameras are new and have never been used. A. Burnton, 49 Sixth avenue, New York City.

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No. 588.

"STILL WATERS."

By E. A. Wheatley.

THE
AMERICAN AMATEUR PHOTOGRAPHER.

Vol. XI.

NOVEMBER, 1899.

No. 11.

Concerning Orthochromatism, No. 1.



HY do photographers continue to use a plate that is admittedly very imperfect, when they might, at the same cost, and just as easily, employ one that is much nearer perfection? Strange as it may seem; the facts are so patent that they may be taken for granted, and having seen, to a large extent at

least, the satisfactory outcome of our crusade against the employment of lenses of too short focus, we shall try to convert them from the error of their ways by setting forth both the cause and the cure.

With the advent of *picture-making* by photography there came into use a new word; not meaning a new thing, as it had always been included in "light and shade," as applied to reproductions in black and white. It is "values," and means something that the photographer had not then, and has not yet fully understood; and which in his work he does not, or at least very rarely get. True values in photography means the correct rendering of the various degrees of *luminosity* in monochrome, as reflected from the variously colored objects that may be in the subject photographed.

It will be sufficient for our purpose to say that the sensation which we

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No. 678.

By Newton W. Emmens.

"A MARINE STUDY."

call light is the result of the action on the retina of a bundle of waves of different lengths or rates of vibration of the all prevailing, although problematical ether, projected thereon by the lens of the eye. It therefore follows that this light sensation can be produced only by such bundles as come to the eye in a straight line, either from a self-luminous object, as a flame, or as reflected from objects. It will be convenient to consider this bundle as including waves of three different lengths, or rates of vibration, and that sources of light as well as objects that reflect it, may send to the eye bundles containing one, two, or all the three. With direct light photography has very little to do, although self-luminous bodies, and even the sun, are sometimes included in the range of the lens; so that here at least our attention will be mainly given to that which is reflected.

Objects that come within the range of the camera may be divided into three classes; those that reflect practically all, those that absorb practically all, and so reflect none, and those—and they are by far the greater number—that reflect any one or two of the different wave-lengths.

As with what may be called the *compound* bundle, so it is supposed to be with the retina. The so-called rods, believed to be its sensitive material,

are said to be of three different kinds; each sensitive only to one of the three different wave-lengths; the longest producing the sensation of red, the shortest that of violet, and that of medium length the sensation of green, white light being the result of the simultaneous action of all three.

Now it will be evident that the reproduction of a colored object in black and white, or monochrome, can be effected only by translating the various colors according to their degrees of luminosity; that is, in proportion to their apparent lightness or darkness in relation to each other, and that is just what the ordinary photographic plate will not do.

The engraver or etcher starts with white paper as his highest lights only; and when he comes to color sees in the compounds of green and red a higher degree of luminosity than in compounds of green and blue. The former he represents by thin and distant lines; the latter by those that are thicker and closer.

The photographer, on the other hand, who trusts to the ordinary plate, finds matters reversed, the compounds of violet and green being rendered as vastly more luminous than those of green and red. Blues, blue greens,



No. 672.

[All rights reserved.]

By M. R. Case.

"MEN OF JERUSALEM."

and greenish blues, all of which are to the eye very much darker than the yellows, greenish yellows, and orange, are represented as little lower than white, while the lighter tones are often shown as little higher than black.

So long as photography was employed merely as a record of fact, or photographers were content with "the ordinary thing" in portraiture, it did not so much matter, and possibly photographers have got so used to such false values that they do not mind, although we know that there are some who try by various dodges to overcome it. Sunning down the paper, either before or after printing, retouching, masking, and working on the back of the negative; but although these may mend matters a little, they fall far short of what may be done by an easily accomplished change in the nature of the plate, or rather of the emulsion with which it is coated.

And this brings us to orthochromatism. Although there are differences of opinion as to what light actually does to the film, all agree that it does something, and that something includes work, and that work implies absorption. White and blue light do work on the photographic plate, because the emulsion with which it is coated absorbs them, and the greenish and reddish yellow are represented as almost blacks, because they are not so absorbed.

From this it will be evident that all that is necessary to secure plates that will give correct color values is to make the emulsion so that it will absorb the green and red as well as the blue. Plate-makers have been working at this problem for years, and although full success has not yet crowned their efforts, there are plates on the market that are a wonderful improvement on those that, curiously enough, are almost universally employed. Just why this should be, and how best to induce photographers generally to employ the more nearly perfect instead of those that are admittedly very far from being so, must be reserved for the next article.

A Word for Snap-Shots.

BY M. R. CASE.

BELIEVING that the hand camera has come to stay, and that it is the only practical camera to be used by most of us while traveling, I should like advice and suggestions in regard to its use.

I consider the hand camera the most practical one to be used in traveling, not only because many of us are limited by time in our trips around the world and are generally with relatives or friends who cannot be kept waiting while the tripod is set up, but also because by such delay we should



"BY THE QUIET WATERS."
BY
F. P. STREEPER.

often lose the picture. I remember an interesting scribe in Damascus, whom I saw when a good light was on him. With a hand camera I could have caught his picture, but he moved while I was opening and adjusting the light and focus of my stand camera.

Such pictures are those which it is to the advantage of the traveler to take for himself. For what is the use of trying with portable cameras to photograph Giotto's Tower, the Taj Mahal, or the great Daibutsu in Japan, when better photographs of all of these than hand cameras can take are already to be bought?

Photographs of the interesting street life of these foreign cities are worth our taking, for as soon as the professionals get these people into their studios, they assume a posed, unnatural look which spoils the interest of the picture. A valuable negative in my collection is one which, though full of technical errors, shows the whole funeral ceremony on the burning-ghât at Benares. On the bank of the sacred Ganges lies the dead body of a child, swathed in a white cloth; back of this are two funeral pyres, one of which is just being lighted by the man nearest of kin to the deceased. Above are the mourners. Descending the ghât on the right is a man



By John A. Grant.

"COOLING OFF."



No. 682.

By F. C. Beach.

"ROB ROY."

carrying aloft a pan in which are the sacred ashes from some pyre to be thrown into the river. The picture is interesting and was to be caught in a flash; for our boat was going slowly down the river, the man was stooping but momentarily to light the pyre, and the ashes would soon be cast from the pan. It was a snap-shot, and as such a more complete representation of this old Hindoo ceremony than any to be found in the larger photographs for sale at the shops.

There is also another difficulty about using the tripod abroad, that is in the less frequented cities of the East, or even in Cairo or Kioto, where the American lady is still of too much interest to the natives for her to care to set up even a temporary post in the street. For instance, on the Mikado's birthday, when many holiday-makers were about the streets of Kioto, having gone into a photographer's near the hotel to look at some photographs he had been coloring, I looked up to see a crowd around the door. Surprised, I questioned the photographer as to what was going on in the immediate neighborhood. He hemmed and hawed, and finally with considerable embarrassment said: "The American lady is very curious," meaning that the crowd had gathered to look at me. There was no rudeness,

merely childish curiosity, but a crowd collected by a camera one morning in Cairo was less easily dispersed. Some Arab boys had been posing on the street, so the photographer wished to reward them with some back-sheesh, or petty money, but she was so surrounded by them that she had to seek the nearest retreat, which happened to be a restaurant or saloon, where the keeper threatened to throw water on the boys to disperse them. But fortunately an officer came up and scattered the crowd. These two incidents have been given to show the difficulties which might attend the setting up of cameras in these picturesque eastern cities, where in small ones, like Damascus, even the wearing of the simple European dress attracts a crowd.

So the use of the tripod is not practical, yet in looking over a collection of snap-shots taken from Sitka to Damascus, as well as on a journey around the world, they are not found to be without faults as photographs. It is, therefore, with the hope of improving my own photographs of travel that this paper has been written for advice and suggestions in taking snap-shots.

Another matter akin to this in which many travelers would like to profit by the experience of others is in having films developed. For most of us travel too quickly to take the time to develop our own work, we also fear to carry the necessary acids and fluids in our trunks, while many valuable films have been lost by professionals in out of the way corners of the world who did not know how to treat them. Films can, of course, be sent home for development, but this requires their being on the water more than is desirable. It also prevents the amateur's knowing by continuing to see the results of his work, whether he is making the best use of his camera.

Ozotype.

WE reproduce the following from a recent number of the *British Journal of Photography*, thinking that it may interest those of our readers who have written us on the subject, and whose difficulties we could only guess at.

"On my return from a holiday I have just come across your issue of August 18, containing a letter from an American correspondent, Mr. Colin Napier, relating to "Ozotype." I am sorry to say that in nearly all the working instructions with regard to this process which have been published unauthoritatively the writers do not strictly adhere to the method of working I laid down in my paper before the Royal Photographic Society, and so experimenters are led into error.



"SAN GABRIEL RIVER."
BY
MISS CATHERINE SOPHR.



No. 564.

By Henry K. Cowen.

"UTE PASS."

In my opinion the principal cause of failure is soaking the carbon tissue too long in the acetic solution, and the omission to thoroughly surface-dry the squeegeed print and tissue between blotting paper before hanging up to dry. It is astonishing what a small quantity of acetic solution is required. The temperature of the acetic solution should be between 65° and 75° F. for smooth paper. The carbon tissue should be immersed for *one* minute when soft tissue is used, and for one and a half minutes for hard tissue. At the expiration of this time the print should be brought in contact with the

carbon tissue under the surface of the solution (of course avoiding air bubbles), and the two, clinging together, withdrawn at once, this operation lasting about ten seconds. Squeegee and surface-dry as soon as possible, and hang up to dry. When dry, immerse in cold water for twenty to thirty minutes, and develop in water at about 106° F. Glycerine added to the acetic solution will be found of great advantage. A good formula for ordinary rather plucky negatives is:

Water	40 oz.
Glacial acetic acid	1 drachm fluid.
Hydroquinone	15 to 20 grains.
Glycerine	2 drachms fluid.

Do not *over*-print.

"I take this opportunity to enjoin experimenters to wait a little while. An improved sensitizing solution and a special carbon tissue are being prepared, and, when everything is ready, those photographers who aim at producing artistic pictures in a permanent medium, of any color and on any paper, will be surprised to find how easily it can be done."

THOS. MANLY.

By nature men are nearly alike; by practice they get wide apart.

The Kromskop.

The following communication from Mr. Ives speaks for itself:

DEAR SIRs:

I am sorry to see that, in the October number of your journal, prominence is given to a very imperfect device which has been produced in England with a view to profit commercially by the fame of the Kromskop.

It should be known that the blending of two primary colors (red and blue) through different eyes, first proposed in this connection by C. Nachet, cannot be satisfactorily accomplished by one person in a hundred—that the “Kromaz” image will not bear comparison for one moment with the image in a true photochromoscope; that the patentees, who were formerly employees of the manufacturers of my Kromskop, have not only attempted to deceive by imitating the name of my invention but have copied original details of my construction, and that the alleged “new system” infringes two of my United States patent rights.

If for no other reason, I would not permit the “Kromaz” to be made or sold in this country because the imperfect results which it must at best yield would discredit one of the most important triumphs of the century—the true reproduction of the colors of nature by the aid of photography. Any attempt to make the public believe that such a device as the “Kromaz” is capable of giving Kromskop results would be a fraud.

Very truly yours,

F. E. IVES.



By Frank E. Foster.

“THE BROKEN HOOK.”

Are Things Just as They Should Be?

BY W. J. THOMPSON.

A LITTLE controversy, or perhaps rather a little mild chaffing, has been going on between the editor of the *Photo-American* and a correspondent in the *British Journal of Photography*, in connection with the quantity of exports and imports of material photographic between America and Great Britain, which has set me a thinking.

I know that the editor of *Ours* has more than once said to correspondents "the magazine has nothing to do with politics," but none of us can get altogether out of them, and at the risk of being sent to the waste basket I venture to introduce a little into this.

The patriotic editor begins, so far as I can see, by glorying over the fact that a certain make of cameras, Velox paper, etc., have taken a hold of the British market; and, through ignorance, goes out of his way to belittle British cabinet work generally, while the correspondent, with more than good cause, retorts that but for the, as alleged protective, but really obstructive tariff, the balance would be very much on the other side.

That may be as it may. I am not interested in the fact that one country may turn out a better quality of certain articles than another; but I *am* interested in the fact that the people of one country can get certain things that they want at a reasonable cost, and with the least possible trouble, while the people of the other cannot.

From the catalogues of such houses as Tylar, Watson, or Perkins, there are a hundred and one things, some of them proprietary, that can only be got from the makers, and which I would like to get, and which the peoples of other countries may get by simply making use of the parcels post, but which the free American could only get through roundabout ways, and at a cost that makes it prohibitive.

The question of a tariff, whether for protection or revenue, *versus* free trade, should have no place here, nor be in any way allowed to obstruct anything which tends to the development of the intellectual faculties of a nation's people. It will not be denied that in that development science and art are potent agents, nor that everything necessary for their study should be to the people free as air.

Photography, and all that is connected therewith, is closely associated with both science and art, neither of which own any nationality, but tend to universal brotherhood; so that the nation that restrains them by fiscal relations commits a national blunder.

As an illustration of such fiscal restraint, take the case of one lens made



No. 676.

By Henry D. Allison.

"All the labyrinths of summer are buried beneath one snow-white, inviting pathway."

only in Germany and England, and possessing certain qualities found in no other. Already it is employed here by hundreds, and hundreds more desire to get it, but are restrained by the cost. Being one of the latter I have before me the price list of the English maker, and as he quotes the price both here and there, and in dollars too, as if to bring the difference more forcibly home to us, the oppression of our fiscal arrangements becomes evident.

The price in England is \$40, with a discount to those who know how to get it, and in America \$70. Why should I be made to pay \$30 over and above the value of the lens? Remember, it is not a question of free trade *versus* protection, but a plea for the free admission of that, which in a certain sense, is not connected with trade at all; of that which more than all also together encourages the intellectual development of the people.

Already this has been done to a certain extent, in the case of schools and colleges; but they are but a part, and only a small part, of the whole that influences the development of a nation, and the sooner "the powers that be" recognize the fact, the sooner will the nation take the place she ought to hold in the intellectual development of the nations.

In addition to the free entry of apparatus and material incident to the study of science and art, and complementary to it, the one thing necessary is the "parcels post," by means of which, within the postal union, a postal order enclosed in a letter, would bring by return mail whatever took our fancy.

The Contribution Box.

"EACH TELLS THE UNCAS THAT HE SEES AND HEARS."

WHILE looking over some back numbers of the A. A. P., I came across a description of how to employ an old clock-works to keep cotton wool in motion for the printing in of clouds. I have no use for cotton clouds, or pastures with heavy wooly skies that cast no shadows on the landscape beneath; but the article reminded me of one of the most ingenious devices I ever saw for rocking the developing tray. It was in the dark room of a photographer in a little village on the shore of Long Island Sound; and he had fastened to a couple of boards the works of an old clock, so as to give to his developing tray a perfect "see-saw" motion. In the article referred to above the writer says he paid three dollars for an old clock, but surely that is unnecessary, as a good kitchen clock (new) can be bought for 75 cents.

C. E. C. K.

[Various methods of using an old clock as a means of rocking the developing tray, have been published, and clockwork rockers are on sale at most of the stock houses. This would have been more useful if the arrangement had been given.

Our correspondent is mistaken regarding the article to which she alludes. The cotton wool was not intended to make clouds, but to keep the



No. 566.

By William J. Meyer

"A RIBBON FLASH."

(Taken August 11, 1890.)

masks separate from the negative. The clock work was intended to give the necessary motion to the covering cardboard. We have never recommended cotton wool for cloud making, but surely our fair friend knows that many of our best pictures by our best men are so, to a large extent at least, because they have had clouds printed in from separate negatives. There are few prints with "bald headed" skies that could not be vastly improved by the printing in of suitable clouds.—Eds.]

The International Congresses of the Exposition of 1900.

CONGRESS OF PHOTOGRAPHY.

AN international congress of photography will be held, under the patronage of the French Government, in the series of official congresses of the Exposition of 1900. The sessions will open on Monday, the 23d of July, in one of the halls of the Palais des Congres, and will last until the afternoon of Saturday, the 28th. For membership, it is sufficient to have paid the subscription fee of 10 francs; this gives a right to be present at the meetings of the congress and to take part in the visits which are to be prepared by the organizing committee. The members may also present communications and will receive the printed volume of proceedings.

This congress is to continue the work of the two previous international congresses, held at Paris in 1889, and at Brussels in 1891. It will examine the practical side of the resolutions adopted on those occasions, with a view to improving and perfecting them in the light of experience. Decisions will also be taken in regard to various new questions which have since arisen. There will be public sessions, as well as the general and section meetings, some of which will be devoted to practical work. There are also to be lectures and organized visits to scientific and industrial establishments.

Specialists are particularly requested to communicate to the committee their observations on questions which should be submitted to the consideration of the congress. The members of photographic societies and the editors of scientific journals are invited to make known as widely as possible the details concerning the congress. All communications should be addressed to the secretary general, M. S. Pector, 9 Rue Lincoln, Paris.

Notes.

AMATEUR COMPETITION.—The publishers of *Leslie's Weekly* have instituted a weekly competition by amateur photographers, and issued a circular in which they say:

"We offer a prize of five dollars for the best amateur photograph received by us in each weekly contest, the competition to be based on the originality of the subject and the perfection of the photograph. Preference will be given to unique and original work, and for that which bears a special relation to news events of current interest. We invite all amateurs

to enter this contest. Photographs will be returned if stamps are sent for this purpose with a request for the return. All photographs entered in the contest and not prize-winners will be subject to our use unless otherwise directed, and one dollar will be paid for each photograph that may be used.

"Special Notice.—Every photograph should be carefully and fully titled on the back, not only with a description of the picture, but also with the full name and address of the contestant, plainly written. Address Amateur Photographic Contest, *Leslie's Weekly*, 110 Fifth avenue, New York."

Our readers know that we look with disfavor on such competitions, competitions organized by what may be called the lay press, believing, as we have often said, that they have done and are likely to continue to do, very great harm. From ignorance or other cause, prizes are frequently awarded to prints utterly unworthy of them, although they may have been the best, or the least worthless of the lot, with the result that the "prize winner" lies on his oars forever afterwards, regarding himself as so near the goal of perfection as to need no further effort.

We welcome the competition of *Leslie's Weekly* in the hope that it will be an exception to the rule in so far as that it will see that its judges not only know what can and should be done by photography, but that they will have the courage to say so where there are no prints worthy of an award.

CARBON PRINTING.—In the *British Journal of Photography* W. T. Wilkinson, a well known authority on the subject, says: "One of the reasons why carbon printing is not so much practised as it ought to be lies in the fact that prints made upon home-sensitized tissue are always so much flatter and inferior to those made upon tissue bought ready-sensitized, and, as it is not always convenient to have to send to the makers for a fresh supply, many people leave the process severely alone, and use some other that gives them good results without any trouble. The true reason of this is that all the published formulæ for sensitizing carbon tissue give far too strong a solution of the bichromate of potash, viz., 3 per cent. in summer, 5 per cent. in winter. These are both far too strong, and with any tissue will give flat results. The best strength for the purpose will be found to be 1½ per cent. in summer, 2 in winter."

PARALLELISM IN COPYING.—From the *Journal of the Amateur Society of India* we clip the following simple method of securing parallelism between the photographic plate and an object which is being copied.

"Set up the camera in front of the plan or map to be copied, and adjust it with a spirit level. Fix a compass to a square block of wood, bring one

of the edges in contact with the object to be copied, and note the exact position of the compass. Then apply the same edge of the block to the focusing screen, and turn the camera on the screw, so that the needle of the compass assumes the same position as before."

PASTE THAT WILL KEEP.—Although several of the commercial pastes or mountants leave nothing to be desired, even to their low cost, there are many who like to prepare their own. The following formula will be found to give an excellent and long-keeping paste.

Arrowroot	8 ounces.
Gelatine soft)	$\frac{3}{4}$ "
Water	60 "
Alcohol	5 "
Acid carbolic	60 minims.

Beat the arrowroot into a smooth cream with about four ounces of water and let the gelatine soak in the rest. When thoroughly swollen, turn both into a suitable vessel, an enamelled iron saucepan will do, and boil for a few minutes with constant stirring. Remove from the heat and keep stirring till cool, and then add gradually, with constant stirring, the acid dissolved in the alcohol.

A SIMPLE SOLUTION OF GELATINE is useful for some purposes, especially one that does not "set" into a jelly. It is not, perhaps, so generally known as it should be that chloral-hydrate deprives gelatine of its "setting" power, but Valenta has taken advantage of this in the following formula, which gives a clear, permanent, adhesive solution:

Gelatine	2 ounces.
Chloral-hydrate	1 "
Water	6 "

Soak the gelatine in the water till soft and dissolve over a water bath. Add the chloral and continue the heat, with constant stirring, for five minutes. Two ounces alcohol may, with advantage, be substituted for that quantity of the water.

PHOTOGRAMS OF '99.—This always welcome annual visitor will probably reach us after we have gone to press, so that we shall not be able to tell our readers all about it till December. We know already, however, that in consequence of the large increase of really good work here as well as elsewhere, examples which the publishers are unwilling to exclude have been sent in in such numbers as to induce them to make the volume for this year twice the size of that of last. The price, consequently, in England, instead of one and two shillings, as formerly, will be two and three shillings.

A NEW INTENSIFIER.—The Messrs. Lumière have introduced a new intensifier, or rather a modification of an old one, by substituting sodium sulphite for the hyposulphite in the usual solution of mercuric iodide, and claim for it that the intensified negatives do not turn yellow, or change in any way. They say: "This advantage in the use of anhydrous sulphite of soda over hyposulphite springs from the fact that an excess of anhydrous sulphite can be used without disadvantage, while intensification ceases in the presence of an excess of hyposulphite. After determining the cause of alteration and staining of the image, we have arrived at completely avoiding this after-effect, by treating the negative, after intensification, with a developer which, without changing either the color or intensity of the image, prevents all the subsequent yellowness, and assures its preservation with the initial color and intensity. Intensification with mercuric iodide, practised under the conditions which we indicate below, solves, therefore, completely the problem of direct intensification.

This intensifier presents the following qualities: 1. It enables intensification to be effected by the use of a single solution, and the action to be followed closely on the plate, which is impracticable with the ordinary perchloride of mercury intensifier. 2. The intensification may take place when the plate leaves the fixing bath, after a summary wash, without fear of the yellowing of the film, which would infallibly occur with perchloride of mercury if all trace of hypo were not carefully eliminated. 3. Finally, the bath can be rapidly prepared, its components being very easily soluble.

COMPOSITION FOR NORMAL INTENSIFIER.

Water	100 parts.
Anhydrous sulphite of soda	10 "
Mercuric iodide	1 part.

The instructions are as follows: Dissolve the anhydrous sulphite of soda in the water, then add the mercuric iodide. The solution is almost immediately ready. When it is wished to intensify the plate on leaving the fixing bath, it should be briefly washed and then placed in the intensifying solution. If the intensification is to take place on a negative already dry, it is useless to wet it before plunging it in the intensifier. The action is rapid and very regular, and the gradual intensification can be easily followed by examining it against the light, without fear of stains or discoloration, as with perchloride of mercury. The rapid action of the intensifier can be restrained at will without changing the final result, by the mere addition of water. On the other hand, the energy of the intensifier can be increased by adding a larger quantity of mercuric iodide, together with anhydrous sulphite of soda, but without exceeding the maximum quantities of 2 grammes of mercuric iodide to 20 grammes of anhydrous

sulphite of soda. On leaving the intensifying bath the plate is briefly washed in running water, then plunged for some minutes in one of the following developers, prepared as for an ordinary development: Diamidophenol, para-amidophenol, hydramine, pyrogalllic acid, hydroquinone, etc. Under these conditions, without altering the intensity of the negative to any appreciable degree, the after-effects mentioned above are avoided. The operation is finished by washing the plate in running water in the ordinary way.

THE COMBINED BATH continues to gather recruits. In a communication to the Photographic Society of France, M. Gabelle makes a plea for its employment instead of the usual separate solutions. He says: "If the prints are toned in the usual separate bath, it not unfrequently happens that a coarse blackish-brown precipitate of gold replaces the silver of the image, and it is by the use of the combined bath that the author obtained the gold image, in tints ranging through rose, deep purple, violet, and bright red. A new bath does not give the best results, the deposit being often coarse and brownish." He has found what we have all along taught, that the new bath should always be mixed with some of the old.

SMALL MASKS.—In an article on the extracting and enlarging of small figures in groups, in *The British Journal of Photography*, T. N. Armstrong gives a good and convenient method of making the necessary masks, nothing of the kind small enough, or of just the right size and shape, being on the market. He says:

"Another method which also yields excellent results is sometimes possible of accomplishment, having the further advantage of not requiring the application of any pigment to the surface of the print. This is done by providing a cut-out mask that just fits nicely round and suits the shape of the head that is being extracted, but how is anyone to provide such small sized masks as from three-quarters of an inch or thereby? Such masks are certainly not a marketable commodity, but larger sizes are, and any stock of lantern masks can be utilized for the purpose. When it is desired to mask off, say, the head and shoulders of a figure in a group, a lantern oval mask having a white surface on one side must be procured—any dealer will supply them in various shapes—and, having obtained one that just suits the shape required, it should be placed against a piece of black velvet and pinned to a board, the white side out, of course; this is then photographed in reduced size on a slow lantern plate, and, if a small stop be used and the plate backed and developed properly, a negative will be produced having clear glass in the center of the oval, and sufficient density around it to enable it being superimposed on the glass side of the negative which

has been made from the paper print, and which it is intended to employ in the final enlargement."

THE LATE WILLIAM KINNINMOND BURTON.—We learn with deep regret of the death of our esteemed occasional contributor, W. K. Burton, which occurred in Tokyo on August 5. Elder son of the late John Hill Burton, Historiographer Royal of Scotland, and educated in Edinburgh, we knew him from his earlier days, and had some little share in influencing his bent toward photography. His last direct communication was written from Formosa and appeared in our April number. He was then recovering from a serious attack of malaria, and a few weeks later he wrote us a short note congratulating us on what he called our "characteristic fight for the employment of lenses of long focus"; adding that he had now reason to think that he was mistaken when he said, in his previous communication, that the reason why opticians charged more for lenses of long, than those of short focus, was because of the greater diameter of the former.

His connection with photography did not long pre-date gelatino-bromide times, but he was a diligent student and learned fast, soon becoming a trusty guide and a recognized authority.

He was for a time closely associated with another of our old friends, the late W. B. Bolton, and it is a somewhat curious coincidence that the one was taken away so soon after the other, and both in what may be called the prime of life.

EXHIBITION OF AMATEUR PHOTOGRAPHS.—John Wanamaker of, according to the circular, Philadelphia, New York and Paris, sends for publication, but too late to be of use to our readers, notice of an exhibition of amateur photography to be held in his galleries on November 11 to 18. It is not said in which of the three cities the exhibition will be held, but from the fact that the three judges, Messrs. Rau, Bacon and Pancoast, are Philadelphians, and that "amateurs in Philadelphia and vicinity may send prints of any size for exhibition only, or for competition," we presume that it is that city.

Mr. Wanamaker, following the lead of the Syracuse Camera Club, noticed some time ago, takes an economical way of giving prizes, by inducing the principal manufacturers of apparatus and material to offer them in the shape of "goods" (and in a few cases "gold") to the list value of \$550; each, for photographs taken with or by the various articles in which they deal.

What we said in reference to the exhibition organized by *Leslie's Weekly* applies equally to this, only, as we know who are to be the judges

here we believe that the usual harm will not be done by the awarding of prizes to worthless prints, or to any exhibit that does not, to a satisfactory extent, include all the four requirements mentioned in the circular, viz., that the subject shall be interesting; that the print shall fully illustrate what was intended; that it shall do so in an artistic manner, and that the technique shall be meritorious.

PHOTOGRAPHY AT THE PARIS EXPOSITION.—We have received from the Director of Liberal Arts and Chemical Industries the following notice, that will be of considerable interest to those of our readers who may visit Paris next year. "They do some things better in France."

"During the entire period of the Paris Exposition of 1900 professional and amateur photographers will be afforded every facility to operate their cameras. Upon the payment of a fee of 50 centimes (10 American cents) per camera a certificate will be issued that will permit photographs to be taken of practically everything except private exhibits; for these special permission will be necessary."

Words From the Watch Tower

BY WATCHMAN.

ARE the makers of the "Tella" camera following the lead of theatrical and other "stars," who, for advertising purposes, get robbed in hotels, half killed in railway trains, or get themselves widely talked about through other equally undesirable accidents? It looks like it, as the following story is going the round of the English papers:

Two well-known photographers, spending their holidays at Bar-mouth, went out in a boat to fish, and succeeded in capturing such an abnormal quantity of bass as to become the talk of the town and raise in the mind of the inspector of fishing a suspicion that it could only have been done by some illegal means, by some forbidden instrument. They went out on the following day, and, although not quite so successful, were confronted on landing by the aforesaid official, with a demand for liberty to inspect their fishing gear.

All went well till he came to the cameras, when his suspicion was almost turned to certainty by the absolute refusal to allow him to open them unless in a "dark room." Further information induced them to adjourn to a photographer's, where, in the dim red light, the spiral springs and other parts of the mechanism made assurance doubly sure, and the photographers had all that they could do to convince him that they were intended to catch photographs and not fish.

To add insult to injury, to the decree of absolvitor was added "expenses" in the shape of the photographer's charge for the use of the room, and as this they point blank refused to pay, the matter is likely to come before the court for settlement.

Like the woman's letter, the pith of which is said to come in the *post scriptum*, the milk in this cocoanut lies in the letter sent to the makers by one of the photographers, the well-known Charles Bassano, who says: "Yes, the cameras which caused the Barmouth adventures were Tellas, and you can make any use of that fact you like. I am pleased with the working of mine; it has never once failed, and I have some good negatives."

* * *

Chemists have generally fought shy of the theory of development, or at most spoken of it in a tentative way; but George D. Firmin, in the August number of the *Camera* comes out with a boldness that looks like truth, however far from it it may be. By way of correcting the author of a previous article, he says: "The alkali forms a salt with the developer; with pyro, sodium (potassium or ammonium) pyrogallate; with metol, sodium, (ditto) monomethyl-paramido creasolate (! ! !), etc. Solutions of these salts have a very strong affinity for bromine and will take that halogen away from the argentous (?) bromide (Ag,Br) leaving metallic silver. The silver salt unaffected by light (Ag Br) is not changed unless the alkali is too strong, then we have fog—and remark, anything which will decompose the silver salt, leaving metallic silver, will do for a developer.

Does he know that, or does he just guess it? and supposing that pyrogallol combines with alkalies to form pyrogallates, and metol to form the salt with the long, long name, is he quite sure that the pyrogallates, or the long-named salt have as strong an affinity for oxygen as bromine, something that can get at it quite as readily?

The fact that pyrogallol will develop an image, faint enough it may be, but still an image without the chance of becoming pyrogallate, goes far to show that his theory is wrong, and all the more so as the way to make that image stronger is by employing an alkali to remove that which prevents its further action.

I am not sufficiently up to date to dogmatise, but until further notice am willing to pin my faith to an explanation of the theory of development that first appeared in the March number of the *AMERICAN AMATEUR PHOTOGRAPHER* for 1894, and more recently on page 41 of "The Right Road to Photography," published by Gennert. Far be it from me to assert

that ~~it~~ is the true and only genuine explanation, but this I will say, that it is more natural than that of Mr. Firmin, and will suit me till somebody offers a better. It is as follows: On the supposition that the sub-bromide theory of the latent image is correct, development means the taking away of the one atom of bromine from the two of silver, and the idea of the theory to which I pin my faith is that that is accomplished by nascent hydrogen. The essential ingredients of the ordinary developer are a reducer, say, pyro; and an alkali, say, sodium carbonate. The sulphite generally added is not an essential, but simply a preservative that is employed with advantage. Similarly, the bromide as a restrainer is a non essential, and therefore it is correct to say that the essentials are a reducer, an alkali, and water.

When an exposed film is immersed in such a solution the first thing that occurs is the decomposition of a portion of the water by the pyro, which, in consequence of its affinity for oxygen, takes one atom of that body, setting two atoms of hydrogen free. This hydrogen, having in its nascent state a high degree of affinity for bromine, takes to itself two atoms of the bromine of the aforesaid sub-bromide, depositing four atoms of free silver in the film. Hitherto the alkali has not got its hand in, but now is its chance. While the pyro can decompose water in a neutral state, it cannot do so in the presence of acid, and that is just what the union of the hydrogen and bromine has produced, acid hydrobromic. No sooner, however, is the said acid formed than it is neutralized by the alkali, with the formation of sodium bromide, a restrainer it is true, but only to a limited degree, which is the cause of a developer, that has been used acting slower than one that is freshly made.

Of course this is but a rough statement, but it will be enough for Mr. Firmin, who is chemist enough to know that while his theory will not account for several things that are known to occur, this will account for all.

* * *

What has come over my generally highly esteemed *British Journal of Photography*? In a notice of a syllabus issued by the Leeds Camera Club, the writer, presumably the editor, says it makes him rub his eyes to see included in the proposed work of the season "the extinct gum-bichromate process." I wonder what some of his contemporaries will say to that, as judging from them, the gum-bichromate method of printing is very much alive, and likely to grow even more vigorous.

* * *

It is amusing to see how "doctors differ." In a recent number of this journal it is reported that a member of the London Camera Club, whose

slides are of the highest order, in reply to certain questions at the close of one of his exhibitions, said that he was satisfied if he succeeded in getting one good slide from the exposure of a dozen plates; while T. N. Armstrong, a frequent writer on lantern matters, tells the readers of the *British Journal* that "with the modern lantern plate the production of a lantern slide, either by contact or reduction through the camera, is one of the easiest tasks of photography." There are slides and slides. Some are easily made and some are not; and until some method of making them not hitherto known is discovered, I shall try for those that cost both time and trouble.

Again, W. F. Miller told the members of the Philadelphia Society never to light the dark room with anything but deep ruby, and by way of reply "Free Lance," in the same journal, says: "If anyone will put a plate under a piece of ruby glass, and one under one of double-flashed orange, and allow the light to pass through, he will find on development that the ruby, which to the eye is much darker than the orange, will give a much-fogged plate after an exposure that will leave that under the orange plate intact." Surely there is something here requiring explanation.

* * *

It is often said that the photographer knows less about the lens than about anything else connected with his art, and if he depends for his instruction on at least some of the magazines professedly devoted to it, it is not to be wondered at.

One of these is before me now, containing an article which, but for the fact that it is endorsed as a prize winner, I should have supposed had slipped in during the editor's holiday, as it includes about three columns of teaching that shows how much the teacher himself needs to be taught, even although, by way of preliminary, he says: "I have run a very extensive and not inexpensive gamut before arriving at a point where I could feel safe in giving advice."

"Facts (about lenses) are chieftains that winna ding, and daurna be disputed," because they are on a mathematical basis.

It is not a fact that good portraiture cannot be done with single lenses because their aperture is not generally larger than $f/16$.

Portraits, at least equal to the best that are being made to-day, were made with single lenses, even with wet collodion twenty times slower than the modern rapid plate.

It is not a fact that "a lens of short focus will of course permit of shorter exposures, and it is not a fact that "beautiful work," meaning portraits, can be done with a lens of $4\frac{1}{2}$ inches on a 4×5 plate,

that is if the image is to be in proportion to the size of the plate. The relative rapidity of any lens, or all lenses, depends, not on their focal length, but on the relation which the stop employed bears to that length, and for anything like truth in a portrait the lens must be at least once and a half the length of the longest way of the plate, while one of our most successful photographers, and one of the most noted opticians, have declared that it should be twice that length, *i. e.*, not less than 10 inches for a 4 x 5 plate.

It may be a fact that this teacher owns very rapid lenses by Voigtlaender, Ross, Beck, and Dallmeyer, and that he has had some made by other prominent makers; but it is not true that any one of them is faster than any of the others, except in so far as one variety or series may work at a larger aperture, *i. e.*, a wider *f* value, than the others.

It *may* also be true that he "made a picture in the one-hundredth of a second with $f/128$," although one's knowledge of lenses and what may be done with them must be considerably limited to enable them to believe it; but the fact remains that whatever could in the way of speed be done with the particular lens to which he thinks the credit is due, could be done with any other lens under like conditions.

The time for speaking of lenses as of 4 x 5, 5 x 7, 8 x 10, or any other *size* is past, and it may be taken as an axiom that the teaching of those who so speak of them instead of by their most important feature, their focal length, is not likely to be worth much.

Our Portfolio.

Communications for the editors, pictures for criticism (only one print at a time), and apparatus and material for examination, should be sent to DR. JOHN NICOL, *Tioga Centre, N. Y.*

561. C. H. RAEDER.—"Not Venturesome," two children looking across the sea in the "what are the wild waves saying" attitude, is a good photograph of a badly arranged subject. The camera has been pointing down, so as to place the horizon within a quarter of an inch of the top, the result being that the sea is represented as an inclined plane steeper than a toboggan slide. To represent the scene as seen by the children the horizon should have been on a level with their eyes, and this would have been natural.

562. H. FLORENCE OLIVER.—In addition to your own correct criticism of the unnamed print, we would suggest as a serious fault the repetition of the top and bottom marginal lines by a straight horizontal line on the margin of the sheet of water, and the nearly as straight sky line. See "Answers to Correspondents."

563. HENRY K. COWEN.—"Ute Pass" is as nearly faultless as anything we have seen for some time. It looks like a ray filter or color screen product, where the filter or screen had been a little too dark, and the exposure a little too short.

In other words, the values are not quite true and the shadows too dark. Half an inch trimmed from the foreground improves the composition. See page 468.

564. WYATT MINSHALL.—"Playing Dentist" is an example of very fine photography, but of the reproductive rather than the artistic class. It was intended to be a picture of the *genre* variety, but instead of the entourage leading the eye to the figures the lens has been focused on the all too ornamental screen that does duty as a background. Nor do we approve of the subject. Art is intended to give pleasure, and pleasant ideas are not suggested by a representation of tooth extracting, even although it is only by children, and with a realism that includes the handy cuspidore, etc. With such technical ability and such excellent little models you should have no difficulty in doing much better.

565. FRANK E. FOSTER.—"On the Way to School" is better than most of what you have hitherto sent, but there is still room for improvement. The exposure has been considerably under, as is evident from the much too black shadows, and the road on the right should not have been so close to the edge. You will never get true values till you learn to expose much longer.

566. W. J. MEYER.—In the lighting flash there is nothing to criticize, but much to congratulate you on having got the best example that we have ever seen of the somewhat rare "ribbon" flashes. We shall be glad of information as to the conditions under which it was obtained, as we shall reproduce it for the benefit of those who may not have seen anything of the kind. Since the above was written we have learned that the flash was caught during a severe storm of wind and rain which began about 6:30 and lasted till 10 P. M. The camera was resting on the window sill, and the lens was uncapped only a few seconds, the flash coming almost immediately after the cap was removed, and during a lull in the wind. The broader flash seemed to come perceptibly before the narrow one. It may be of interest to add that during similar thunder storms at our summer home at Point o' Woods the flashes invariably seem to rise from the dunes to the cloudy sky, never from the sky to the dunes. See page 473.

567. F. R. ARCHIBALD.—"The Wanderer," evidently a traveling tinker examining a hole in a saucepan which he is about to repair, is well arranged, except that it should have had a little more foreground. It is a decided improvement on anything you have previously sent, but we should have preferred to see him seated at his work, and with a less distracting background.

568. A. G. GRAFF.—"Indiana Lowlands" is a fine example of topographical photography with but one fault, false values from under exposure. Six seconds with $f/8$ and ray filter was evidently much too short under the circumstances. Ten or twelve would have enabled you to reproduce trees and water as you saw them, instead of as dark as at dusk.

569. FORREST BULLARD.—"On Yellowstone River" is faulty in composition, in so far as there are two masses of foliage on the left going up out of the picture, with little or nothing to support them on the right. For this you should study some work on composition. It is also *very* much under exposed, the foliage being almost altogether black.

670. F. P. HERBARD.—"Grazing" is excellent in composition; good, generally, in values; and conveys very well the impression of a sunny summer day. But it has two rather serious faults, too much bare foreground, and a white paper sky, the latter, at this time of day, being simply intolerable. The printing in of a suitable sky, or the toning of this down, and trimming off of, say, five-eighths of an inch from the foreground, would make this a really good picture.

671. F. F. MORRIS.—"Fountain at Congress Library" has been taken at an unsuitable time, or development has not been modified to suit the lighting, the result being a nearly uniform dull gray, without sufficient contrast. A larger proportion of both bromide and reducer would have tended to contrast; but the main thing for such subjects is suitable lighting.

672. M. R. CASE.—"Men of Jerusalem" is an apt illustration of the truth of the author's contention in her paper, "A Word for Snap Shots," on another page, as, while the technique is not nearly as good as it might have been if taken on the stand, probably without the hand camera it could not have been got at all. The grouping is satisfactory, the larger figure on the left full of real life, and altogether we have rarely seen an arranged group so free from the sense of "arrangement." The only fault is in the technique, a too limited gradation, which might have been largely supplied by more skillful development. See concluding suggestion to 671. Also page 461.

673. G. F. LEAK.—"In Willowvale Glen" is a meaningless photograph with lights scattered all over. If cut in four the lower right quarter might have afforded material for a good picture, but in trying to take in too much you have got nothing.

674. A. E. MERGENTHALER.—"The Mower," apparently returning from the labor of the day, with well worn scythe on left shoulder and water jug in right hand, is in every sense a satisfactory picture; one that we return to again and again with ever increasing gratification. And yet 'tis not by any means of the highest order of its kind. Depiction, rather than suggestion, is its keynote, although that applies only to the figure, the surroundings being so subdued as to be little more than indicated. Its charm seems to lie in its simplicity and in the concentration of its lighting, both of which leave nothing to be desired. But in spite of that we doubt whether you have fully realized your intention. If the idea was to represent the return from labor at the close of the day, as the general low tone would seem to indicate, the mower is too fresh, walks without a trace of the "weary worn walk" that tells of hard work. If, on the other hand, *going to work* was the theme, the tone is far too low, the hay is already in "coles," and if there was naught else to belie it, the closely driven in cork in the mouth of the water (?) jug would show that he did not expect to again apply his mouth to it that day.

Take it all in all, it is a good picture that might have been better, and one which we shall gladly reproduce.

675. ANDREW EMERINE, JR.—"The Artist" is a fine photograph of the "reproduction of fact" variety. An artist seated on the usual low stool, making a sketch, probably of a distant tower, is of no pictorial interest, especially as it is handicapped by a bare sky, much too white to be in keeping with the landscape. A few clouds judiciously printed in would be a vast improvement.

676. H. D. ALLISON.—"All the Labyrinths of Summer Are Buried, etc." The effort here is evident and, so far, satisfactory; but the faults are equally evident. Under a brilliant sky, with light enough to cast shadows on the snow-covered path, tree trunks and evergreen foliage are, from under exposure, simply black paper. The good qualities are selection, composition, and unusually good atmospheric effect, but all are rendered unsatisfactory for want of the most important feature in such subjects, true values, and a too short exposure has made that impossible. We shall reproduce it as an object lesson.

677. SARA BLACAR.—"Amongst the Lambs" is technically a very fine photo-

graph made ludicrous, partly by the way the camera had been held, and partly by the lens being of much too short focus for the subject and size of plate. In the foreground are several lambs, one of which, broadside on, measures over two inches from tail to snout, while in the distance, represented as only a few yards, one in the same position measures only four-tenths. Then the camera has been so pointed down that while the feet of the foreground animals are cut off by the lower margin, those in the distance are within three-sixteenths of an inch of the top. Such excellent photography should not be wasted on such absurd arrangement. Such blunders furnish the excuse for speaking lightly of photography by those who do not know the difference between the use and the abuse of the camera. We shall reproduce it as a caution.

678. NEWTON W. EMMENS.—"A Marine Study" has been a fortunate snap when sun, cloud, ship, and breaking wave were all working together to give you a desirable opportunity, and you have played your part well, even to catching just enough of the charming bit of light behind the vessel. But why not be a little more careful in mounting? The horizon line is not horizontal, lower to the left by several degrees. See page 460.

679. JAMES THOMSON.—"The Reader" would have been a fine example of portraiture but for its distracting surroundings, the antimacassar on the chair and window curtain; both are even better defined than the figure. Leave such to the professional, and subdue everything but the principal part of your sitter, and don't surround him with the black circle or part of one that spoils this.

680. GIOT POWER.—"Evening." Your disregard of our oft-repeated advice to mount only on boards a little larger than the prints has brought this to grief. Uncle Sam's messengers have taken the liberty of doubling it up, with a result easily understood.

The representation of "evening" is a difficult task, and the effort is creditable, although not very successful. The selection is faulty. A large, perfectly black tree trunk, running from top to bottom, within half an inch of the right margin, and so repeating it, is bad composition, and made worse because adding to the mechanical effect, by the large horizontal branch stretching out a little below and repeating the upper margin. You will realize the force of what we say if you will cover both tree and branch, or, better still, trim them off, and so be able to join in our admiration of the really fine little picture that will be left.

681. W. E. COGSWELL.—"I'se a Little Alabama Coon" is the best thing that you have as yet sent us, only needing a little truer values, which means, in this case, a little longer exposure, to be fine indeed. Arrangement and lighting are both good, and its simplicity gives it a charm easily recognized by all. We shall have pleasure in reproducing it.

682. MR. F. C. BEACH.—"Rob Roy" is a good example of one of the most useful, and, withal, probably most satisfactory phases of photography, the reproductive, that which is intended to, and does, show things as they are, in contradistinction to the pictorial, which aims at reproducing in the mind of the beholder the impression made by them on the mind of the artist. Be this as it may, our younger readers, and we have many such, will thank Mr. Beach for such a fine reproduction of "Rob Roy," the attractive "cart" and its pretty driver. Happy are the youngsters who ride in such a pretty "rig." See page 465.

683. MRS. W. H. PHELPS.—"Bear Grass" is a fairly good but considerably under exposed photograph of, as arranged, a very uninteresting subject. Instead

of photographing a lot of the very curious plants *in situ*, with the blurred and uninteresting background and surroundings, a few should have been selected and arranged in any suitable artistic way, and photographed with a plain background.

684. KENNETH DUNEAR.—“Day Dreams” is hardly worth considering, except as an effort after something, and an effort that is a failure is worth dozens of thoughtless exposures on purposeless subjects. The faults here are obvious; the boy being in as unpicturesque an attitude as it was possible to place him, and the entourage uninteresting. The lighting is also faulty, the face being without a trace of shade. Such subjects require much more study than this has got.

685. MISS CATHERINE SOPER.—“San Gabriel River.” You are not disappointing our expectations. This is a fine rendering of a fairly good subject, although it has one fault, a mistake in selection that lessens its value. We mean the too straight sky line. The breaking of it up by the trees is hardly sufficient to prevent a *feeling* that it repeats the upper and lower margins. We should like to reproduce it, but fear that much of its delicate beauty will be lost in the process. We shall try.

686. E. M. ROBERTS.—“Picnic Park” is a good photograph of a badly arranged subject. A bare sheet of water, even with a series of shadows, is not a picturesque foreground, and when its opposite bank is in a horizontal line, repeating both lower and upper margins, the thing is worse. “Straight on” was the worst point of view that you could have chosen.

687. CLARK WALTERS.—“Cleaver’s Dam” is a fairly well selected subject, although the horizontal line of the falling water is a fault. It should have had a longer exposure and the figures should have been kept out. Such staring at the camera would ruin any picture, however otherwise perfect.

688. DR. F. L. FOSTER.—“Midst Summer Shadows” is a beautiful subject with all the essentials of a fine picture but one, and that is fatal. It is simply black and white, without, in the true sense of the word, a single shadow. Three or four times the exposure would have enabled you to make it a “record.”

689. H. C. D.—“Forbidden Fruit,” a girl trying to reach a bunch of grapes, is good in conception but faulty in arrangement. The background is both obtrusive and unpicturesque, and the left arm seems limp. If you had left her to herself and watched, you would have seen the left arm naturally bend up in a way that intensifies the suggestion of action. We applaud your effort, however, and recommend a closer study of your subjects.

690. No. 142.—“The Amateur Photographer,” a child playing at photographing its father, sends us back for nearly half a century, when just such a scene might have been frequently photographed in our own garden, and tempts us to speak of it more favorably than it deserves. We like the idea, but not the surroundings, although the best, or rather the least objectionable, has been made of them. A larger aperture would have improved matters, by making the distance less obtrusive and concentrating attention on the figures, and a considerably longer exposure lessened the tendency to the simply black and white.

691. W. D. B. CLARK.—“Face Study” is a fine example of what the camera may be made to do in competent hands, and serves as an antidote to the *feeling* that sometimes tempts us to throw up the criticising business in disgust with the flood of worthless snap shots that are sent. In this we have the most perfect technique, combined with high art in the true sense of the word, as well as a

striking illustration of the value of rough surface paper for certain subjects, even when they are not larger than 4 x 5.

692. E. W. HANSON.—"The Last of the Snow" is a good photograph of a subject of no interest, and evidently photographed without thought or purpose.

693. E. B. BUCK.—The unnamed print is, from under exposure and improper development, a waste of material. Sky and water white paper, with leaves and branches simply black. The boat in the center of the white paper water looks just as if cut out and pasted on. Such a negative is not worth printing. Compare it with such as now and then appear in our pages and learn what a marine view may be.

694. J. C. K.—"Country Road" is a well selected subject, only the road should not have been so near the middle of the picture, and the exposure should have been long enough to show the right half as something else than dead black. At least twice as long was required for true representation.

Our Table.

THE ILLINOIS COLLEGE OF PHOTOGRAPHY sends a prospectus that should be interesting reading to those desirous of acquiring a business and practical knowledge of photography, as they will learn that it can be obtained in a shorter time and for less money than could be any other trade or profession.

The college, as we have frequently noticed, is situated in Effingham, Ill., is thoroughly equipped for the teaching of retouching, modelling and etching; posing, lighting, and composition; developing, printing, toning and fixing, including carbon and platinotype, either separately or as a whole, and by a staff of eight competent teachers.

According to the prospectus, a student of ordinary taste and ability may become proficient in from three to five months, and that for a tuition fee of \$75, and from three to five dollars a month for material employed, while board and lodging may cost from \$2.50 to \$4 per month.

If this be true, and we have no doubt but that it is, is it matter for wonder that what should be a desirable, gentlemanly profession, that can be acquired in, say, four months at a cost of a little over \$100, is overrun and its remuneration at a low ebb? We do not say this to discourage the aspirant to photographic fame, but rather to induce him to put heart and soul into his studies, as, although the lower rungs are crowded, there is, and always will be, "room at the top."

We have also to thank the college for a neatly gotten up note book in black and gold, which, as it happened, was just the thing we were most in need of.

"ACETYLENE GAS JOURNAL."—Acetylene has come, not only to stay, but to be almost universally employed, and already has a current literature of its own, which is rapidly removing the dread of the bright illuminator caused by the several serious and sometimes fatal explosions that resulted at first from its employment by those ignorant of its properties.

This journal is a welcome visitor to our table, because we know that the more that is known of acetylene the better it will be liked and the more generally it will be employed; for we have little doubt that the time is not far distant when every little town and every country home will be illuminated by it.

THE KROMSKOP.—From Mr. Ives, whose business address is now 1324 Chestnut street, Philadelphia, comes "Kromskop Color Photography," a pamphlet and price list, the general distribution of which we believe will lead to the possession by every lover of the beautiful, of the kromskop in one or other of its various forms, and of a "Multiple Back" by every amateur who is ambitious, in the simplest possible way, and by the employment of his ordinary camera, to produce "three color" negatives.

We have several times described the beautiful beauty-producing instrument, but may say here, in the words of a well known writer on photography, that "it is the realization of the dream of every human being—the reproduction of the lovely hues of nature. He (Mr. Ives) seems almost to have accomplished the impossible—to have put his foot on the end of the rainbow, and to have caught up the colors of the goddess Iris."

To all who want to know how to add a new charm to the home, and provide an inexhaustible source of delight to its inmates, of all ages, we say send to Mr. Ives for a copy of this descriptive little book.

"**HOW TO SEE PICTURES.**" By Mabel S. Emery. *New York, the Prang Educational Company.* Sales agent, E. L. Wilson, 289 Fourth avenue, New York. We have read this book with a degree of pleasure, that we can hardly find words to express, and profit that will be helpful to us in many ways, and make especially the work incident to Our Portfolio easier and pleasanter than it has hitherto been.

"The author, in her preface, says: 'The aim of this little book is to help those who find pleasure in studying pictures to find still more pleasure, to help those who care but little for pictures to see how much delight and inspiration may be theirs for the taking, and to suggest ways and means of studying photographs and other inexpensive prints.' This she carries out by a series of half-tone illustrations from the works of the old masters and modern painters, subjecting each to a discriminating analysis, exhausting enough to enable the diligent student to, in the words of Hunt, 'own them as he owns 'Casabianca' and 'Mary had a little lamb.'"

One example will do for all, and we take at random Blake's "Death Door," one of the simplest compositions in the book, consisting of only two upright pillars and a cross beam, an open door through which is passing an old man, and on a mass of rock above, a young man. Concerning this, she says: "The idea is simplicity itself—the old man entering into the rest he longs for, the youth springing from the earth, his frame full of vigor and his face full of eager aspiration. We feel certain that the joyful strength of the young man is prophetic for the old man—that just such strength will come to the tired wanderer, and that just so he too will rise to new life and new work. We feel, as we look at the open door, that the darkness and the silence beyond are only like the darkness and silence of a night wherein we can rest to wake up ready for a long, full day.

"Notice the dignified simplicity of the artist's manner of treating the subject. Here is no place for trifling, temporary prettiness. The upright pillars and the cross beam above are severely plain, the opening door is heavy. If closed tight it would seem to guard impenetrable secrets and treasures. But it opens at the old man's approach—there is no need for him to raise the knocker which hangs against the panels. There is a strong inward draught blowing through the door—see how the flowing hair and draperies respond, hurrying the unsteady feet towards the threshold.

"The tired droop of the shoulders, the nerveless hugging of the staff to the side by

an arm whose fingers have forgotten how to grasp a thing forcibly, the shaky look of the knee which we see from behind—all these combine to make us feel how sorely the traveler needs the promised rest.

"The athlete above is full of life and spring. The very pose of the right leg and the right arm mean abounding strength and vigorous self command. Just contrast that arm and that hand with the arm and hand of the man below. Those square shoulders will be able to bear any sort of burden the new life lays upon them, and those eyes, looking upward with such confidence in destiny, will see sights and duties clearly. Everything good and great and happy may come to him. He is immortal youth.

"And yet: We feel a special tenderness for the old man, who is tired, so tired. Perhaps it is because the youth in his strength is self-sufficient and the man in his weakness appealingly dependent; at all events, the bent and trembling figure has a warm place in the hearts of those who care most for the picture. It associates itself in memory with the exquisite imagery and the quiet flowing rhythm of Louise Imogen Guiney's 'Open, Time.'

" 'Open, Time, and let him pass
Shortly where his feet would be, etc.' "

"Doubtless the author often sees more than the artist intended, but that only shows that he builded better than he knew, and so long as she can show it to us we are the richer therefor."

More important, perhaps, to picture makers, is her criticism on the composition and lighting of the pictures, of which the following is a fair sample. It refers to Maas' "Spinner."

Look once more at the picture as a composition, and see how perfectly it was planned. The tall distaff at the end of the flax wheel, with its own soft shadow behind it, helps to break what would otherwise be a glaring triangle of light on the wall, and leads the eye easily across the dark mass of the spinner's left shoulder to the shadows in the edge of the fireplace. Notice, on the other hand, how the light on the legs and the inner rim of the wheel keeps the shadows in the lower part of the picture from being too dense. The deep shadows on the lower left corner of the picture seem transparent, for all their depth, this partly because the form thrust into the shadows (a circle with inner radii) is a form particularly easy for the imagination to trace. We *think* we see more than we actually do see in that dim corner.

"The hint given at the back of the spinner's chair is a very slight hint, but it serves several purposes. In the first place, it gives satisfactory evidence as to the old woman's real pose. Lacking it, we should suppose that there must naturally be a seat of some sort over behind the wheel, but we should have to take it on trust. The hint of a substantial seat for a bending figure gives us unconsciously a feeling of repose and satisfaction. Besides this, the ornamental post of the chair back makes an end for that curving line of light beyond the woman's shoulder, much more diversified and so much pleasanter to look at than it would have been had the light space finished abruptly in contact with her dark petticoats. The light behind her would have had, in that case, the forced, theatrical look of a manufactured halo. As it is, the effect of the mellow daylight on the conscientious, stooping figure has just enough remote suggestion of a halo contained in its perfectly natural, unobtrusive, every-day effect to give us a serene sense of blessing and peace."

The book is beautifully got up, printed on heavy coated paper so as to give the illustrations at their best, and will be a revelation to those who have not hitherto taken much interest in pictures. It should be in the hands of every lover of pictures, and especially of everyone who desires to make pictures by photography.

DOUBLE WEIGHT VELOX AND VELOX POST CARDS.—From the Nepera Co. comes a supply of the above which we have tried with the greatest satisfaction. Printing from an average negative, a pretty pastoral scene, by quite a variety of printing methods, and comparing the results, there is nothing but carbon and platinotype that come anything near that on the double weight velox, and for some purposes it is to be preferred to either of them.

Exposed and developed with such care as a really good photograph deserves, and nothing can be simpler, the result is that beautiful velvety black so much admired and so much sought after; while if printed under a mat, so as to give a sufficiently wide margin, its thickness makes mounting unnecessary, as it is just the thing for the portfolio. As a printing method heavy weight velox is as nearly perfect as we may hope to reach. Without claiming a high degree of prophetic power, we are pretty safe in saying that it will not be long before heavy weight velox, for some kinds of work at least, will replace all other methods of silver printing.

Not less popular are likely to be the velox post cards. Printed under suitable masks, or suitably vignettted, they are really things of beauty; as different from the vulgar German output as light is from darkness, in spite of the charm (?) of color that they have.

Their manipulation is so simple, and the result so beautiful, that we cannot imagine anyone, whether traveling or staying at home, who have distant friends to write to, ever being without them.

IMOGEN.—The Actien-Gesellschaft für Anilin-Fabrikation—we wish they would adopt a title that would mean something more to English-speaking folk—send a supply of their new developer, Imogen, that we have had the pleasure of putting to the test of practical work with much satisfaction. While we cannot say that it is any better than many of their other preparations that have become world wide favorites, it is quite equal to any developer that we have ever tried, and as it is readily soluble, has excellent keeping qualities, does not injure the skin, and may be used over and over again, it is likely to come into general use.

KARMA MATS.—Just as we were suggesting something of the kind as desirable for the printing on double weight velox and velox post cards, a supply of Karma mats comes as if saying: "Here we are, just what you want." They are on thin actinically opaque paper, tough enough to be easily handled, of various shapes, and sizes ranging from $2\frac{1}{2} \times 2\frac{1}{2}$ to $8\frac{1}{2} \times 6\frac{1}{2}$ inches, although we should like to see some considerably smaller for post card printing. They are cheap enough to make cutting them for yourself not worth while, and therefore all who want to print under mats should send to the Karma Co., at Chicago, for their list.

ADUROL.—As indicated in our last, we have now had an opportunity of thoroughly testing this new candidate for photographers' favor, and may say at once that it comes quite up to all that was claimed for it. It is, as has been already said, a combination of hydroquinone and chlorine, in which all the good qualities of the former have been retained and its recognized faults eliminated. It is in the form of a gray granular powder, sufficiently soluble to admit of 10 per cent. solutions, and

its keeping qualities are very much greater than almost any of those that it seeks to displace.

For those who like to work fast, the formula accompanying the developer will be found admirable, but we belong to the slow school, and think we do better work by taking more time. We keep everything in 10 per cent. solutions, adding to the Adurol $2\frac{1}{2}$ per cent. of potassium metabisulphite by way of preservative, and so are able to make up any desired formula with the least possible trouble. After a series of experiments, we think the following will be found, for a normal developer, to be all that can be desired:

Adurol	3 grains.
Sodium sulphite	12 "
Sodium carbonate	10 "
Potassium bromide	$\frac{1}{2}$ "
Water	1 ounce.

With 10 per cent. solutions, of course, the proportions can be varied to suit all different circumstances, but with ordinary exposures and for ordinary development this suits admirably, and that not for negatives only, but for bromide and all kinds of paper, as well as lantern slides. Indeed, for the latter it is especially suitable, as it gives that beautiful brownish velvety black so much admired, but generally so difficult to get.

"THE PHOTO-MINIATURE" for September keeps up to the high standard of its earlier numbers, so it is little wonder to hear that they have already run into a second edition. Orthochromatic photography is its theme, and it is not too much to say that it is the most complete monograph on the subject that has yet appeared. We have long wondered why anything else than an orthochromatic plate is ever employed, and have little doubt that all who read, with the care that it deserves, this little book, will not in future employ an unorthochromatized plate. But photographers are, in some things, a conservative lot; and being, so far, satisfied with the result of our four years' fight for the employment of long focus lenses, we mean now to commence a vigorous struggle for the universal employment of orthochromatic plates.

"CAMERA NOTES" keeps up its reputation as the friend of the picture maker, as the October number is not behind any of its fellows. It gives us the opportunity of seeing Craig Annan's "Little Princess," generally considered to be one of the best of all his wonderfully good works, and of again enjoying Stieglitz's equally fine "Scurrying Home," both of which we are delighted to add to our collection. About Clarence H. White's "Spring" we hardly know what to say. It has some fine qualities, and as the editor says, may be more gratifying to the artistic mind than to that of the general mass of mankind, but we feel that it borders on the eccentric a little too closely, although that may be our fault rather than that of the picture. Nor is the literary food behind that of the pictorial, as Demachy's "Difference Between a *Good* and an *Artistic* Photograph" is an education in itself; and one that should be read by everyone who aspires to make pictures by photography. His six essentials should be engraven on the heart, and no photograph that does not include them all should ever be exhibited. They are "composition, lighting, values, tone, texture, and medium."

CHARLES E. TINGLEY has a misplaced confidence in the messengers of "Uncle Sam," begotten of not knowing them as well as we do, or he would not have sent

through the mail the negative that lies before us now, in more pieces than we care to count. An examination of the largest piece leads us to believe that it is the negative of the print noticed some time ago, and which we supposed to have been printed under some textile material. He sends also a print with a series of finer crossed lines, which, from what we know now, is very surprising, as they are the result, not of printing under a lined or woven material, but of simple reticulation. An examination of the magnified image shows a series of parallel lines crossed by others, just as if woven, the lines between the crossings being a shade less than a millimeter, and with a regularity that is astonishing. Regarding it he says: "It is of no particular utility, but it is rather interesting to note the uniformity of design produced simply by the action of water on the film, at a temperature that must be neither too hot nor too cold." We have seen reticulation often enough to our cost, and could always produce it by leaving the tray at rest, but never before saw it so fine or so regular. As to the "utility," that may or may not come; the fact must always come first, and therefore we shall be glad to know from Mr. Tingley how he can, at will, secure it of such fine and such regular structure.

Letters to the Editors.

MORALITY AT EXHIBITIONS.

DEAR SIRs: In several of the British journals there has recently been considerable correspondence and much controversy on a subject that should have some interest to us on this side. The subject is "Own Work Throughout," and the question seems to be as to the morality of sending for exhibition and competition prints or "pictures," some part of the work on which has been done, not by the exhibitor, but by professionals.

The correspondence originated in a notice or circular issued by a well known firm of enlargers, calling attention to the fact that they had formed a special department for the production of high class enlargements from the negatives of amateurs and others intending to exhibit in the forthcoming Royal, Salon, and provincial exhibitions.

The game began by the appearance of the following letter in the pages of *The Amateur Photographer*.

Sir.—The enclosed circular, from a leading firm, addressed to amateur photographers and quoting prices for carbon enlargements from amateurs' own negatives, for exhibition purposes, and specially mentioning the Royal, Salon, and provincial shows, clearly implies that the firm in question (and doubtless other similar firms as well) are in the habit of receiving orders for the purpose specified. Can it be possible that any amateur would stoop to such a practice and submit such work as his own, either for exhibition only, or in competition for any awards? Of course, it stands to reason that professional enlargers and printers are, with their experience and appliances, able to get the utmost possible out of a negative, and it would seem that if the veriest button-presser handed over his exposed plates to the profession for development, enlargement, or any other necessary process, he would stand a better chance of scoring a success than a genuine amateur, who honestly performed every operation himself.

In spite of the evidence before me, I cannot believe that such a state of dishonesty exists, and shall esteem it a favor if you will kindly throw light on the subject.

Yours, etc.,

HUGH PRICE.

To this the editor replied as follows:

"We are in a position to undeceive Mr. Hugh Price, and can state that a great many amateurs and also professionals do exhibit *for competition* work which has been done for them by expert trade printers; nay, further, we could state a case in which a carbon print produced to order from the exhibitor's negative *actually received a medal* at the Royal Photographic Society's Exhibition not long ago!"

And then, although in a half hearted way, he tries to belittle the dishonesty by the assertion that the guilty ones do not derive as much advantage over their honest fellows as they expect, because the trade enlarger cannot put into the work anything of the individuality of the original author.

So far, it would seem that the question is limited to enlargements made by others from the negatives of the exhibitor, and there may be reasons why that may be allowed as admissible; but from other correspondence I have reason to believe that many prints are exhibited in both British and Continental exhibitions for which the exhibitor has done little beyond selection and exposure.

Be that as it may, and I have little interest in it either way, I should like to raise the question as to how far it is practised here, and to what extent it may be considered justifiable? That prints have been exhibited by at least one amateur of no little fame, and to whom many awards have been made, with which he had absolutely nothing to do after the negatives were dry, I have ample evidence.

While in the studio of one of New York's most famous photographers some time ago, the amateur in question called, and while I was supposed not to hear what was said, or to understand the business transacted, I learned enough to know that it was simply a repetition of what had frequently occurred before. Three negatives were delivered to the photographer to be retouched, printed, and the prints mounted and finished, and that within a certain time, the limit being the day previous to that on which pictures for a certain exhibition had to be sent in, *which was the reason given for the hurry*.

I think it is generally understood that, with a few exceptions prints sent by amateurs to competing exhibitions are required to be, and are supposed to be, "their own work throughout"; and my object in this is to elicit the opinions of the readers of the AMERICAN AMATEUR PHOTOGRAPHER, as to (1) how far this understanding is correct; (2) should any exceptions be made? That is, should the exhibitor be allowed to delegate to another any of the various processes in the production of a print, from the selection to the framing; and if so (3) which of those processes?

I have no personal interest in the question, and do not need to worry over it. The pictures that I have exhibited have generally been awarded more than in my own opinion they merited, but, all the same, I hold very strongly that he who exhibits a picture in his own name and as his work, should honestly see that it is so, from inception to finish, from the first idea or suggestion, to the frame that confines it to itself or separates it from its surroundings.

Of course the photographer need not be a frame maker more than a plate or mount maker, but just as he chooses such plates and mounts as he considers most suitable, so may he select the moulding and prescribe both form and size, which is as

much the "making" of the frame as is the "building" of an architectural triumph the work of the architect, although the stones are laid in position by other hands.

Hoping to see the subject taken up and freely discussed by both exhibitors and promoters of exhibitions,

I am yours, etc.,

A SUCCESSFUL EXHIBITOR.

THE LENS QUESTION.

DEAR SIR: Referring to the article on "Lens Rapidity" in the current issue of the AMERICAN AMATEUR PHOTOGRAPHER, will ask if there is not an opportunity for confusion in making comparisons of the rapidity of two given lenses in the erroneous manner in which practically all makers list their lenses and cameras? I refer to the calling of a lens a 4 in. by 5 in., or a 5 in. by 8 in., etc. Supposing a person to be using a single lens of 5 in. focus on a 4 in. by 5 in. camera, $f/16$ will give him an opening of 5-16 in. If he should get a new lens of the rapid rectilinear type it might be listed as a 4 in. by 5 in. lens and yet have an equivalent focus of 6 in., in which case $f/16$ would give him 6-16 in. or 3-8 in. opening, and consequently the latter lens would admit the most light and be the more rapid.

I know you refer to lenses of similar characteristics, and this would mean equal focal lengths, but I think many would be inclined to infer that all so-called 4 in. by 5 in. were alike.

I do not know much about optics (wish I knew more), but as I understand it the focus of a single lens is practically the distance from the center of the lens to the ground glass when an object is sharply focused, while with the R. R. lens the equivalent focus is equal to the focus of a single lens which would produce the same sized image on the ground glass as the given R. R. lens.

If my premises are correct, would not a common sense view of the question be that as the sensitive surface of the plate, or film, is affected by the amount of light which reaches it, it necessarily follows that the light passing through a given sized opening will have the same effect, whether that opening be behind a single lens costing a few dollars or one of the latest anastigmats costing many dollars?

In other words, if the two lenses being compared are each of 8 in. focus and are used with an opening of $f/16$, the light must reach the plate through a diaphragm of $\frac{1}{2}$ in. diameter and cannot possibly have any greater effect in the one case than the other. Of course, as you say, the high-priced lens may be capable of being used with a much larger stop, and *in that sense only* is it quicker.

I do not know, of course, what difference there may be in the light passing power of the glass used in the single lenses and the higher priced anastigmats, but I do not imagine there would be any appreciable difference from this source in practical use. Another point about which I cannot speak from knowledge, only from a common sense view, and that would be that the more the number of reflecting surfaces in the lens, the more light would be absorbed and prevented from reaching the plate. This would allow slightly more light to reach the plate with a single lens of a given focus and stop than would be possible with an anastigmat made of at least six separate pieces of glass.

Yours truly,

"IGNORAMUS."

[You are mistaken in supposing that because $f/16$ of, say, a lens of 16-inch focus is one inch in diameter, it will admit more light than $f/16$ of an 8-inch lens

with a diameter of only half an inch. The light in the one case has twice the distance to travel, and in consequence of the well-known law the two are exactly equal.

You are correct in your other suppositions, and especially so in condemning the folly of speaking of lenses as 5 x 7, 8 x 10, or any other size. As we have often said, when opticians mention sizes in their lists, they mean only that the lenses, with the stops mentioned, will cover those sizes; but to speak of them as such is meaningless. In speaking of a lens, whatever else may be said of it, its principal feature, the focal length, should take precedence. Thus, "a 6-inch R. R.," "a 12-inch symmetrical," or "a 16-inch anastigmat."

Theoretically, the fewer glasses, and the fewer cemented surfaces there are in a lens, the more rapid it will be; but practically the absorption and the reflection are so trifling as to be perfectly negligible.—*Ens.*]

Society News.

[Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tioga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal.]

SIoux CITY CAMERA CLUB.

We are glad to see that the Sioux City amateurs have formed a club under the above title, and have no doubt but what they will find much benefit therefrom. D. B. Henderson, the secretary, asks for hints as to how best to carry it on, but we can only say that the first thing to realize is that his society will be like all others, in the fact that on his shoulders will rest the burden, and on his energy will it depend for success. We may say, however, that the fewer rules and by-laws the better; regular meetings in a convenient place of meeting, at which he should manage to always have something interesting in the shape of demonstrations, no matter how simple. He should see that the club takes all or most of the journals, and study the reports of the doings of other clubs, copying therefrom as much as he may consider suitable to his own. He will also find it to the advantage of the club to send us, regularly, reports of the meetings, as human nature is still weak enough to like to see itself in print, and we are always willing to gratify it. We may add that one of the first steps should be to secure a good optical lantern, a single one, start the members to slide making, and have regular testing nights, as well as regular exhibitions. Till he is in a position to join the Slide Exchange other clubs will gladly lend him slides.

CASE LIBRARY SALON.

The Case Library, of Cleveland, O., has issued the prospectus of its fourth annual Salon and Exhibition, which will be held from November 20 to December 2 of this present year, exhibits for which should be sent to the Library not later than October 30.

No entry fee or charge for space will be made, and admission to the exhibition will be free. Exhibits must be from negatives made by the exhibitor, and no picture that has received an award at any other exhibition, or that has been previously shown in the Library will be admitted.

The exhibition shall consist of six classes, namely: Class A, portrait and figure studies not made in a professional studio; class B, landscapes, marines, clouds; class C, animal studies; class D, flower and fruit studies; class E, architecture, interiors, machinery, and manufactured objects; class F, a set of two or more pictures telling a complete story, and the judges shall consist of two artists and one photographer, and shall be appointed by the librarian and known only to him. The awards shall consist of certificates for superior excellence of equal value.

Intending exhibitors should, for all necessary information, apply to Charles Orr, librarian, Case Library, Cleveland, O.

THE CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS

has taken time by the forelock and issued a very attractive circular in red and black, in the shape of an invitation to those who are still outsiders to share the privileges which the members enjoy. The following extract will show something of what those are, and the spirit in which the directors write:

"The season of 1900 opens most propitiously for our society. We have good reason to congratulate ourselves upon the progress we have made and upon our bright prospects. We begin the season with 150 members, nearly three times the number we had one year ago. We have a comfortable, commodious club room, all our own; dark rooms and work room with every convenience for all branches of photographic work. We now become affiliated with and a part of the Art Institute of Chicago, each member of our society being entitled to all the privileges of annual membership in the Institute.

"We claim the right to recognition as an art society, and hold that photography is entitled to a place in the realm of art. The Art Institute by admitting us to its membership, and placing at our disposal the new quarters which we will hereafter occupy, is doing much to encourage us in emphasizing the artistic side of our work. We are under many obligations to the Institute for these and other favors."

We may add that the annual dues are only \$10, including Art Institute dues, and that we consider this society one of the most highly favored in the country.

NINTH ANNUAL EXHIBITION OF THE TORONTO CAMERA CLUB.

This exhibition will be held in Toronto, Canada, from December 5 to 9, inclusive.

In open classes: Gold, silver and bronze medals will be awarded to the first, second and third best pictures, respectively.

Silver and bronze medals will also be awarded for enlargements and lantern slides. Full particulars can be obtained from John J. Woolnough, secretary, 94 McPherson avenue, Toronto, Canada.

The Toronto club is composed of many excellent photographers, and there is no doubt but what the coming exhibition will be of high quality.

THE CAMERA CLUB OF NEW YORK.

The regular monthly meeting was held on October 10, and President Murphy announced the closing of competitions for the President's cup, and one other about November 1, next. Attention was called to the exhibit on the wall by Mr. Clarence H. White, of Newark, O. Then the meeting adjourned without discussing matters of scientific interest.

Mr. White's exhibit is made up mostly of photographs of one or two persons in varied positions, taken against the light of a window, very much like the

average undertimed window photographs made by beginners, in which there is a loss of detail in the shadow side. Some are purposely indistinct and blurred, we presume with a view to soften contrasts, but are not to our mind attractive as art studies. One landscape with a rail fence in the foreground possessed a soft atmospheric effect in the distance, while another landscape looked as if it was printed from a thin negative and was repulsively muddy throughout. There were in all 121 photographs. Mr. White has secured some interesting effects in photographing against the light. He gives a comparatively short exposure to avoid halation.

Recent Patents and Trade Marks.

[The following digest of patents is furnished by DAVIS & DAVIS, patent solicitors (successors to Alexander Davis), Washington, D. C., from whom copies of patents may be had.]

WILLIAM H. LEWIS, Huntington, N. Y., assignor to the E. & H. T. Anthony Co., New York, N. Y.

Roll-holder Tension Device. No. 631,402.

Embodies supports for the spool, one at least of which is elastic, an axis for the spool engaging said supports, and a friction pad interposed between one of said supports and the spool.

HORACE W. MUNSEY, Chester, Pa., assignor to the Eastman Kodak Co., of New York, N. Y. No. 632,736.

Consists of a stock having a channel through it, a spacing opening therein, a cutting edge at the discharge end of said channel, a film roll-holder at the inlet end of said channel, and elastic means for pressing said film roll against said stock.

EMIL NOLLENBERG, Berlin, Germany.

Photographic Tray. No. 633,148.

The tray is provided with separated plates forming a semi-partition at a point slightly above the bottom thereof, a groove being formed in the side of the tray opposite the plates and at an equal height.

JEFFERY T. FERRES, Anderson, Ind., assignor to the J. W. Sefton Manufacturing Co., same place and Chicago, Ill.

Photograph Protector. No. 633,360.

Consists of two covers, each consisting of a single sheet of double-faced corrugated paper provided at its middle with two transverse creases, a strip being interposed between the creases, forming an expansible hinge.

EDWARD A. DOBBINS, New York, N. Y.

Photographic Washing Tank. No. 633,818.

Consists of a tank having an inlet and an outlet adapted to preserve a certain level of liquid, devices for suspending the flexible prints or films vertically from one edge, said devices consisting of slotted tubes and rods fitting in said tubes and nipping the inserted edge of the print.

AULEY B. SHEPPARD, South Burgettstown, Pa.

Developing Tray. No. 633,913.

Has overhanging sides to form a partial cover and the ends of the bottom curved upward in the form of a rocker, whereby the tray may be rocked back and forth to properly dispose the solution without spilling.

AUGUSTUS STUDDIFORD, Liberty, N. Y.

Photographic Washing Apparatus. No. 633,922.

A tank having a water supply, a wheel mounted to turn on a vertical axis in said tank and adapted to be rotated by the water supply, a series of vertical posts on said wheel adapted to hold the tray when the wheel is turned.

Answers to Correspondents.

[Correspondents are requested to notice that communications intended for the editors should be addressed to DR. JOHN NICOL, Tioga Centre, N. Y.]

H. FLORENCE OLIVER.—The information you seek would occupy all the space allotted to this department. Consult a good text book. The best is "The Right Road to Photography," published by G. Gennert, and to be got from our publishers.

L. H. R. GASS.—The formula is correct, and correctly made up. The precipitate is free sulphur, and is harmless. The solution may be filtered or decanted, and may be employed as long as it fixes in a reasonable time. There is nothing better.

SOPHIA W. THOMPSON.—We have recently received several letters complaining of the same trouble, prints refusing to be removed from ferrotype plates, on which they had been squeegeed to secure a highly glossy surface. The writers, like you had all been successful till recently, and all use "Solio," and as we cannot otherwise account for it, are constrained to suppose that there has recently been some change either in the paper or its preparation. A remedy will probably be found in dusting the plate with talc or "French chalk" and, by a circular motion, rubbing it almost all off again.

JESSIE HARRISON.—We had seen the article to which you refer, but there is nothing new in Dr. Hofmann's experiments except the attribution of them to a wrong cause. Statements regarding photography, or any other branch of science, in the lay press are to be taken with large quantities of salt.

MRS. W. H. PHELPS.—A simple way to stop the leak in the camera bellows would be a piece of black court plaster, which if thoroughly moistened, will stick to the cloth inside. A patch of rubber cloth may be put on with rubber solution, now to be had almost everywhere. Yes, "matt" 'velox is suitable for landscape prints; indeed, no one whose aim is artistic work, or who has sufficient taste to produce it, would print on a glossy surface now.

WALTER L. PRENTISS.—It is contrary to rule to reply privately. Every reader of the magazine is entitled to send prints for criticism. See directions at the head of the column.

J. F. SMITH.—There is no "right" proportion of potassium bichromate and water for the ray filter. They should be varied with the varying purposes for which it is employed. Judging from the results that come to us, B. & L. send it out too strong. For ordinary landscape work, including clouds and seascapes, we find about 1 per cent., say, 5 grains to the ounce, just about right.

ARTHUR STRONG.—The "tone" is a matter of taste, and what any particular toning solution will give depends more on the negative than the formula. The color of the print sent is, in our opinion, and judging from all the silver prints we see, in the opinion of a large majority of photographers, the most beautiful that can be got on any variety of silver paper. The negative, however, is far too thin, and has been far too much under exposed to be worth printing from. We know of no better formula for toning "Aristo-platino" than that issued by its makers.

J. P. COUGHLIN.—For pictorial purposes the only advantage the anastigmat would have over your present lens would be that, depending on its available aperture, it would be a little faster. If one-half of a stereoscopic negative is more exposed than another, that is, gets more light, other things being equal, it would show that the relative sizes of the stops were unequal. You can ascertain and adjust this by trial with cardboard stops, reducing the size of the over exposing one, or *vice versa*. Stops are easily made of thin sheets of "ebonite" or hard rubber. Openings near the desired size may be made with brace and bit and accurately adjusted with a countersink. Indeed, so much better are they than brass, that we have fitted them to all our lenses not provided with iris diaphragms.

C. F. MURRAY.—The paper seems suitable for kallotype printing, but would be better of sizing with arrowroot made into a thickish cream, and applied with a sponge plentifully and evenly. Any paper free from metallic particles will do, but personally we like to employ a roughish drawing paper, such as Whatman's.

FEL. KAMENSKY.—We cannot spare room in this column for replies to all your questions, especially as you may find the required information in most of the text books. The "white skies and black trees" are the result of too short exposures. In development of such the sky and water, and indeed the lights generally, become opaque before the necessary detail in the shadows is brought out. You may ask as many questions and as often as you like, but you should not trouble us with such as you may find for yourself in any text book, especially "The Right Road to Photography," published by G. Gennert, New York, who, or our publishers, will mail it to you in exchange for 75 cents in stamps.

E. C. SRIGLEY.—The question as to whether a woman, who a few years ago, was for nearly two years employed as an assistant and retoucher to a photographer, is now entitled to compete in an amateur competition, regulated by the following law: "Amateur artists are those who do not paint, or touch painting for a living," is in our opinion, simple. The implied disqualification has reference only to the present, and should not be strained to include the past, and therefore we should consider her a competent competitor. In reply to the other, we would say that under the circumstances we should not consider her debarred from any ordinary amateur competition. In any future communication, please attend to the notice at the head of this column.

MARY RAMAGE.—You may lower the tone of the waterfall by gently rubbing it down with, say, the finger of an old glove moistened with alcohol, or with Farmer's solution on a tuft of cotton.

G. W. ARNOT.—We have so often spoken of the folly of beginning the study of photography with a hand camera that we are not a little surprised at your request for so much help under the circumstances, as it would be a waste of both our time and yours. Lay aside your hand camera till you have experience enough to use it, get a camera that you can focus on the stand, study carefully a good hand book,

and when you have learned all that you can from it, and find difficulties that you cannot overcome, send to us and we shall be glad to help you.

ROBERT FRIES.—The lower end of the spectrum, the blues, is more chemically or actinically active than the upper, the yellows. It is also more refrangible but much less luminous. When a beam of light passes through an uncorrected lens, the more refrangible rays cross or come to a focus at a point nearer to the lens than the yellows, or luminous rays; and as it is the latter that make the visible image, it is called the "visual" focus. As it is the blues that do the work, the point at which they cross is called the "chemical" focus. In a lens corrected for photography the chemical and visual foci are coincident, but with an uncorrected one they are generally separated by about the 1-32 of the distance between the optical center of the lens and the focusing screen, when the subject is in visual focus.

J. R. DINGLE.—The fact that you get the "halo" round the whites, as shown in the enclosed prints, with your own instrument and not with others, shows that it lies in your camera or lens. Taylor found symmetrical doublets that gave lens flare, and cured it by a slight separation of the elements, but yours is not lens flare. Neither is it halation, that can be prevented by backing, or the employment of non-halation plates. The probability is that there is a minute leak somewhere about the lens or its fittings; not large enough to impress the darker parts of the subject, but sufficient to make the halo complained of. Remove the focusing screen, wrap the focusing cloth round the head and back of the camera so as to exclude every trace of light; and, out in the sunshine, turn round and round in every direction. Failing that, and you are quite sure that the fault is in that camera and not in others, we advise returning it to the maker, who will gladly exchange it for another.

F. T. J.—The universal system of marking stops is more generally known than you seem to think, and is found in all or most of the modern text books, especially in our recently published "Right Road to Photography." This being so, we have such pressure on our columns that we do not care at present to spare space for the article that you suggest; more especially as just such an one appears on page 120—the March number—of our 1896 volume. All the same, however, we thank you for the suggestion, and later on may repeat the explanation.

R. S.—You are mistaken, it is not a negative from a negative, but a negative from a positive that is directed in the paragraph to which you refer. Read more carefully the first paragraph on the page, and you will understand the matter easily. Negatives from positives in the camera are made in the same way as are lantern slides.

By "mounted photos may be copied in the camera in the ordinary way" is meant that the mounted photo is to be placed in front of the lens, and at such a distance as will give an image of the desired size, and photographed as if it were a portrait or any other object.

EUGENE BROWNELL.—A successful method of stripping the film from the glass will be found on page 393 of our 1896 volume, the September number. Another method is to soak the negative in a 1 to 20 solution of hydrofluoric acid, till the film begins to frill, when it will be easily removed; or, instead of the not so easily got acid, one ounce each of alum and hydrochloric acid in ten ounces of water may be employed. In any case, you had better experiment on a waste negative, as successful stripping comes only after practice.



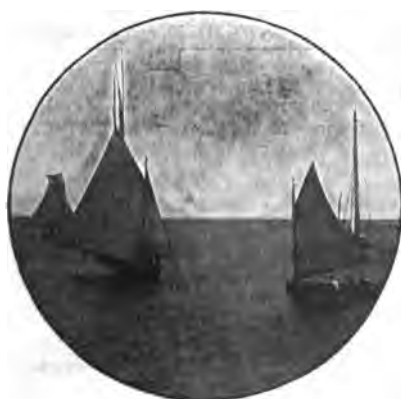
THIS figure shows the size of objects and large field obtained when photographing at a given distance with the Convertible Anastigmat Lens of 6½ inches focus, composed of systems of 9 and 14 inches focus. The Convertible Lens works at full opening and gives speeds of $F: 6.3$, $F: 7.0$, and $F: 7.7$, according to combinations used.

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For Sale and Exchange.—A fine mandolin, worth \$22, almost new, and instruction book, to exchange for a 4 x 5 or 5 x 7 double lens camera. Al. Cesal, No. 760 West 18th street, Chicago, Ill.

Wanted.—7 x 9 or 8 x 10 Goerz or Ross-Goerz lens in good condition, with or without camera and outfit. Address, stating lowest cash price, J. M., Box 203, Niagara Falls South, Ontario.

For Sale.—Convertible Zeiss Anastigmat lens No. 11, in B & L diaphragm shutter cost \$112.50, for \$82. *Lens is new.* Willing to send C. O. D. for examination. H. Seelig, Illawara, La.

For Sale.—An Eastman 4 x 5 No. 4 Bullet Special Kodak, with two double plate holders and Feather tripod. Been used but a short time. Cost \$30; will sell for \$25 cash. Reason for selling: I wish to buy a long-focus outfit. Owen Middleton, Box 104, Berlin, Wis.

Sale and Exchange.—"Music of the Modern World," cost \$26. "Triumphs of Modern Art," \$25. "American Illustrators," \$6. "French Illustrators," \$6. In perfect condition. All, or part, and part cash for a camera or lens. Ed. Heim, 730 Second avenue, New York.



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THE
AMERICAN AMATEUR PHOTOGRAPHER.

VOL. XI.

DECEMBER, 1899.

No. 12.

The Hand Camera.

BY WILLIAM KNIGHT.



No. 559.

By F. C. Boker.

"IN THE SURF."

THE article by Miss M. R. Case, in the November number of THE AMERICAN AMATEUR PHOTOGRAPHER, deserves more than a mere passing notice. It is a plea for help to work out a very hard, but a very desirable problem, well worthy of the attention of those best able to give the desired help.

While fully agreeing with all that you have said about the folly of employing the hand camera without a knowledge of its limitations, or without keeping within these limits, I as fully agree with all that has been said by Miss Case, of the benefits derived from its legitimate use, and in her

desire to secure photographs of the hundred and one things that cannot be got without it.

Granted then, that the hand camera is a necessity, the question is, What are its limitations, and how far can they be extended? So far as the camera itself is concerned, its arrangement and construction, whether for plates or films, whether magazine or plateholders, are simply questions of convenience, or suitability for the kind of work intended; questions that each one may settle for him or herself, as the limitations do not in any way depend on how they are settled.

If we take it for granted that the platemakers have reached the limit of sensitiveness the whole thing hinges on the lens; and that not so much on its quality as on its working aperture—the f /value of its largest aperture or stop. According to the U. S., the portrait lens at $f/4$ is taken as the unit, and called No. 1, and the stops generally supplied with lenses are, omitting fractions, $f/5$, $f/8$, $f/11$, $f/16$, $f/22$, etc., and numbered respectively 2, 4, 8, 16 and 32; the figures indicating the relation that the f /value of each bears to all the rest. Thus, is $f/16$, the aperture of the lenses in most of the cheaper hand cameras, requires an exposure of half a second, and the conditions under which that would be sufficient are few and far between, the same length of time with $f/4$ would be equal to just sixteen times as long. Or, to put it differently, with an aperture of $f/5$, and there are now many lenses on the market working at that speed, what can be got with half a second would require with the $f/16$ four seconds.

It will then be evident that the one thing needful for the kind of work indicated by Miss Case is a suitable lens; one with a working aperture of not less than $f/5$, or at the very least, $f/6$, and to secure anything like correct perspective, a focal length, for a 4 x 5 plate, of not less than 7 or 8 inches.

Roll-films are now so perfect that they may be trusted, even for a trip round the world, but each should be packed in a separate tin, kept tight by a rubber band, and they may be kept till the photographer returns, or sent home for development with perfect safety.

But the worker, even with such a hand camera, should not go without a tripod, as there are many subjects that cannot, even with $f/5$, be photographed by a snap, a good example of which we have in the "Casa Nova," by Miss Case, that appeared in the August number of this journal. We are, as the editor said, thankful for it as it is, but would have been more so had it got an exposure long enough to give it in its true values.

My ideal outfit would be a planar lens with an aperture of $f/3.6$, faster than even the U. S. unit, which is sixteen times faster than the cheaper hand camera lenses at $f/16$, a well made camera of the focusing pattern, and a roll holder, movable, so as to be able to employ plates when I so desired. A finder of the "brilliant" variety, with perfect coincidence between its image and that in the camera, and a light tripod of the folding kind, to fold into such compass as would go into an ordinary trunk. With rising front, swing back, level, or any of the other fittings sometimes recommended I should have nothing to do, as they are more trouble than they are worth. For shutter, after much consideration and many experiments, I say with perfect confidence that there is nothing like the "focal-plane."

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"IN THE CRASHIM VALLEY."
BY
F. P. STREEPER.

That such an outfit would be costly goes without saying, the lens alone being listed at \$109, and another fifty would have to be added to get the rest of the proper quality. But think of what one would be able to do with such an outfit, especially when there is the spirit of an artist behind it; and of the quality of the enlargements that might be made from the pictures that should result from such an union.

The Kromskop.



No. 706.

By E. A. Donnally.

"A MORNING GLORY."

SINCE 1889, when Mr. Ives sent us a copy of his then just published "A New Principle in Heliography," we have continued to follow with interest his search after photography in the colors of nature by the three color method, till its culmination in the beautiful instrument that is now on our table.

During its inception here and its exploitation in England, we have frequently noticed it, but such notices were always from hearsay, and now when we have seen it we are inclined, as did the Queen of Sheba, to say that "the half was not told," or to quote from the descriptive booklet, "Seeing is believing. No amount of testimony quite prepares one for the vivid realism which characterizes the Kromskop reproductions," and we

thoroughly endorse the poetic opinion of one of England's best known writers on photography, when he says: "Mr. Ives has brought before the club a perfect realization of the dream of every human being—the reproduction of the lovely hues of nature. He seems almost to have accomplished the impossible—to have put his foot on the end of the rainbow, and to have caught up the colors of the goddess Iris."

Kromskop, not a very melodious title, means "seeing color," and surely

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"THE PERPLEXED MUSICIAN."
BY
FRANK R. MILLER.

No. 504.



No. 728.

By J. B. Bauer.

"TAKING AIM."

never was instrument more worthy of its name. Three stereoscopic positives strung together as a ladder, differing apparently only in size, being a little smaller, from ordinary stereoscopic transparencies; and each apparently alike, are simply laid on the steps of the instrument, when lo, the landscape, or whatever the subject may be, is seen in all the glory of the colors of nature, and that in her most brilliant effects. The change from one subject to another is but the work of two or three seconds, and so perfectly is everything arranged that should there be, for any cause, a want of coincidence or coalescence or proper blending, a touch of one of two screws will at once secure perfect alignment.

In the instrument on our table, there are at this moment six apparently similar $2 \times 1\frac{7}{8}$ transparencies of a wonderfully beautiful landscape, including distant mountains, a middle distance of pastoral beauty, and a foreground of foliage and water, with two steamboats on its surface, altogether making, in their uncolored state, a charming photograph, and one that to the untrained eye looks as if the whole six were exactly alike. Lay them on the steps of the Kromskop, however, and—well, one thinks he will never care to look at an uncolored photograph again. It is simply inde-

scribably beautiful. The whole six are blended into one, and that, not only in the colors of nature in every shade into which she can combine them, but in the colors of nature idealized beyond the power of the palette of the greatest master of color of *any* age.

Nor is the Kromskop confined to giving color to the pictures made for it. By the simple opening of a door and the withdrawal of the two mirrors, we have a stereoscope of excellent quality, in which can be examined ordinary stereoscopic transparencies with better effect than in most of the ordinary stereoscopes on the market, and in addition to that we have in it a means of teaching the nature of light more convenient than anything hitherto employed, as well as a ready and certain way of examining for color blindness.

There are many other uses to which the Kromskop may be put, but we will content ourselves with saying that if all could see it as we see it now, there are few families that could afford its very reasonable price that would not at once include it among their household gods, and regard it as a most valuable means of instruction and amusement.



No. 727.

"SOLITUDE."

By G. P. Lester.

Copyright 1900
by G. P. Lester
New York

We are glad that the Kromskop has come to us at this seasonable time, as we cannot imagine a more acceptable Christmas gift that a father can make to his children, or a friend to a friend, than such an instrument. And should those children or those friends be photographers it will be all the better; as Mr. Ives has put on the market the means by which they may make the Kromskop slides, the color records, for themselves.

It is perhaps natural to suppose that an instrument that can do so much will be somewhat delicate to handle, but that is far from the case. Ours, after undergoing the ordeal of the "baggage smasher" from Philadelphia to Tioga Centre, was out of sorts certainly, but the interior arrangements are so simple, that on opening it it was put to rights by a single touch. One of the mirrors had jumped from the ledge on which it rests, and needed only the touch of a finger to replace it. Nor is there a difficulty in comprehending its principle and practice; as, while to study the instructions is absolutely necessary, they are so simple that a child may understand them.

Not caring to trust altogether to our own impressions, we have shown the Kromskop pictures to quite a number of our friends, artists, professional men, and men of more than average culture and education, and read to them what we had written, and, without exception, they declared that we had not said one word too much; that, indeed, we might have said more in favor of the wonderful instrument without saying more than it deserves. Since writing the above, we see from the *Philadelphia Medical Journal* that Mr. Ives has lectured on "Color Photography in Medicine," before the College of Physicians, of Philadelphia, and shown in the Kromskop, with all its realism, diseased tissues and persons, including cases of ulceration, jaundice, etc., with which those present were both surprised and delighted. The discussion that followed the lecture made it evident that the consensus of opinion was, that for the preservation of the records of disease, whether for study or teaching purposes, nothing hitherto employed can approach the union of photography and the Kromskop, and that it should be employed in the hospitals generally.



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THE
MOUNTAIN ROAD
BY
G. P. LESTER.



"A MOUNTAIN ROAD."
BY
G. P. LESTER.

The Second Photographic Salon at Philadelphia.

BY CHARLES R. PANCOAST.



No. 394.

By C. W. Stevens.

"AN OLD MILL "

“If anyone finds fault with this Salon, they simply don’t know *anything*,” a member of the Photographic Society’s Salon committee was heard to remark. Such a statement might emanate from egotism, or it might be founded on fact; that it was no egotism on the part of the enthusiastic committeeman a careful inspection of the pictures now on the walls of the Academy of Fine Arts will amply prove. Profiting by the experience of last year and a judicious selection of a board of judges, the management has placed before the public the finest exhibition of works of photography that has ever been the writer’s province to see. Right here it may be said that it is the first exhibition of pictorial protography in this country where the judges

were all photographers of known artistic ability. It has been the writer’s boast that the “infant industry” of picture making by the camera no longer needed the fostering protection and too often the rebuffs of the brush artists. It has grown in spite of them. It can stand alone and demand in its own right and on its own merits the recognition of all lovers of the beautiful. That such an event was to come there could be no doubt, but it took tangible form in a resolution passed by the Photographic Society, to the effect “that in all future exhibitions by the Society the members of the jury or board of selection should be, as far as possible, skilled in the art of photography.” This, then, paved the way for the unqualified success of the Salon. Another good feature was the placing of the pictures shown by the board of judges in a class by themselves, and hung as complimentary exhibits, thus avoiding the unpleasant feature of last year’s Salon, where the judges passed on their own work. In order to secure as large and fine foreign display as possible arrangements were made with

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"THE MOWER."
BY
A. E. MERGENTHALER.

No. 674



By Dr. J. Y. Simpson.

"BREAKERS."

Mr. A. Horsley Hinton, of London, to invite a number of the best workers to send only their choicest specimens, with the understanding that these pictures would be hung independently of the jury. The result was a splendid collection, of which more will be said later. It is no disparagement to our countrymen to say that, as a whole, the American work suffers by comparison with the English. There is in much of the work which we see a striving after something and just falling short of attainment that is absent in the best of the foreign pictures. To put it more concisely, zeal and originality overpowering good taste. There is scarcely any of that seeming disregard of the fitness of things in the transatlantic work which marks a number of the American pictures. It is well and desirable to be original and inventive, but to be truly artistic one must keep within certain bounds. The war of the focus appears to be still "on," for all varieties have their place, from the very sharp to the very fuzzy.

The Salon was opened by a "private view," which was largely attended, eminent photographers from all parts of the country being present. The following statistics may not be uninteresting. Of a total number of 1,130 pictures received, 168 were from thirty-one specially invited exhibitors. Deducting these there were 962 submitted to the jury, and of

this number 182, the work of eighty-eight persons, were accepted and hung. All the pictures are framed in a more or less tasteful manner, and are admirably hung. A catalogue containing a number of excellent illustrations, has been issued. In addition to the regular exhibits there are a number of portraits of the principal exhibitors. To describe the exhibits in detail would occupy too great a space, so the writer will content himself with singling out such as particularly took his fancy, beginning with those by the judges. It was with great pleasure that a marked improvement in the get up of Mrs. Käsebier's pictures was noted. It has always been a source of regret that her wonderful artistic ability could not be coupled with careful execution. Her work this year shows that she appreciates the value of improved technique. Miss Johnson's exhibit is most satisfying. There is a brightness and vivacity about her work, excellent artistic taste and judgment, coupled with faultless technique, which is most pleasing.

Mr. White's work is disappointing. All his pictures are pretty much of the same style, and his choice of models is not always the best. The writer has seen other pictures by this gentleman which would more fitly represent him than those now hung. Mr. Troth, as a careful and conservative worker, has shown some of his best efforts, which do him credit. His pictures suggest more of the painstaking care of the English exhibitors.



By Dr. J. Y. Simpson.

"AN ANVIL SOLO"

Candidly, the writer does not like Mr. Day's pictures at all. There is a morbidity of sentiment that is unpleasant, and his portrayal of religious subjects, while possibly not sacrilegious, is repulsive. It is a pity he does not turn his undoubted artistic talents in more healthful channels.

Of the "specially invited" exhibitors, the work of Mr. A. Horsley Hinton first claims attention. To say that this gentleman is the greatest living landscape photographer is no exaggeration. His pictures show a wonderful appreciation of the subtleties of nature's moods, and his ingenious methods of manipulation stamp him a true artist and a master. Most of his work is so well known that a description seems unnecessary.

In portraiture, William Crooke, of Edinburgh, stands alone. It is simply a triumph of photographic art, and his pictures are by all odds the finest portraits in the Salon.

Mr. J. Craig Annan's seven pictures are all up to his high standard. It is seldom that one meets a more satisfactory photograph than his "Lombardy Plowing Team," No. 14. A Rosa Bonheur could do no better. Among other works of note may be mentioned "Grey Avon's Peace," No. 25, by Harold Baker; "Reedy Wastes," No. 18, by W. Smedley Aston; "Dreamy Marshland," No. 146, and "Evening Before the Day of Rest," No. 149, by Karl Greger. "The Storm Lifting," No. 167, by Charles F. Inston, is one of those superb effects where everything combines to make a wonderful result. The effect of the light on the water, the lugger under reefed canvas against a background of storm clouds, completes a happy combination rarely met with. Will Cadby is guilty of perpetrating a fake in his "There Came a Big Spider," No. 73. The idea of a nude female figure sitting on a stone wall in close proximity to a *toy spider* of mammoth proportions is, to say the least, ludicrous. That the talent of the father has descended to the son is marked in the work of Mr. Ralph W. Robinson. His "Becalmed," No. 251, is a gem. The broad expanse of water, the idle sails, all tell the story. The exhibit of Mr. Robert Demachy, of Paris, is especially interesting, and very beautiful as showing the great capabilities of the gum bichromate process, of which he is evidently a master. His pictures do not bear reproduction and one must see the originals to appreciate the subtle effects he strives for. "A Group of Cattle," No. 56, by Maurice Bucquet (Paris), is a wonderful piece of photography, as showing the effect of motion without the rigidity so often seen in efforts of this kind, where the exposure has been too brief. His "Open Sea," No. 57, is a clever marine. Ten pictures by Mr. Alfred Stieglitz (New York) are worthy of careful and close study. Versatility is one of Mr. Stieglitz's strong points, and whether in portraiture, *genre*, or landscape, his work excels. "A Dreary Day," No. 279, and "Snow: a



"MARSHLAND."
BY
R. B. LAMSON.

No. 731.

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Foreground Study," No. 284, are particularly fine, while "A Vignette in Platinum," No. 285, shows how by local toning a remarkable flesh tint can be produced.

Of the jury passed pictures much can be said, showing as they do a great range in thought and execution. Originality seems to be at a premium, and certainly what the modern photographer will not think of no one else need try. Mr. Prescott Adamson (Philadelphia) shows a number of winter scenes, all of which are both interesting and artistic. W. R. Bland (England) has a wonderfully fine church interior, No. 47. L. Dardonville (Paris) is represented by a charming piece of photography in "The Team," No. 94. The feeling of action and power in the large Norman horses straining at their load is wonderfully well portrayed. "Home Port," No. 136, by D. F. Gay (Worcester, Mass.) is a thoroughly satisfactory marine view. Jos. T. Keiley's portraits of Indians are most interesting and artistic, since one could hardly imagine the noble red man as lending himself to artistic effect. His "A Bacchante," No. 196, is especially daring in its conception. James B. Morrison's "The Worshippers," No. 229, showing two figures seated before a colonial church window, is worthy of commendation from the admirable way in which it is carried out, as well as the originality of conception. J. W. Nicholson's four pictures show an originality and care in execution most creditable, his "Mood of March," No. 235, being particularly good. For a typical portrait there is nothing in the Salon better than "From Old Virginia," No. 244, by Virginia M. Prall (Washington). The strong, rugged face is so truly characteristic of a typical southerner as to be unmistakable. Hinsdale Smith's three landscapes are charming, but would be vastly improved were he to omit the use of bolting cloth in printing; the "half tone" effect is a positive detriment. The portraits by Sarah C. Sears (Boston) are most satisfactory and pleasing. Her method of framing, showing a wide margin around the print, is in strong contrast to the accepted method of allowing the moulding to come close to the picture. It is an open question as to the best method of framing; but certain it is that Miss Sears' pictures are most effectively set off by the wide mats. Miss Eva L. Watson (Philadelphia) has a number of gems in portraiture and *genre*. There is such a refined, artistic feeling in her work that the beholder is both charmed and fascinated, her "Sleeping Infant," No. 324, and "May Apple Leaf," No. 326, being particularly striking. Miss Mathilde Weil (Philadelphia) is worthily represented by five pictures, her "Lady With Muff," No. 332, being particularly interesting from the admirable way in which the lights and shades are managed. Among the other members of the Philadelphia Society, whose work is of a high order, may be mentioned Robert S. Red-

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"THE RUINED CASTLE."
BY
W. M. WILLIAMS.

No. 557.

field, John G. Bullock, William H. Roberts, Garret L. Reilly and Edmund Stirling. In conclusion the Salon is a success in every way, and it behooves all students of pictorial photography to give it careful and conscientious study, for it is a liberal educator.



Orthochromatism, No. 2.



By F. P. Streeper.

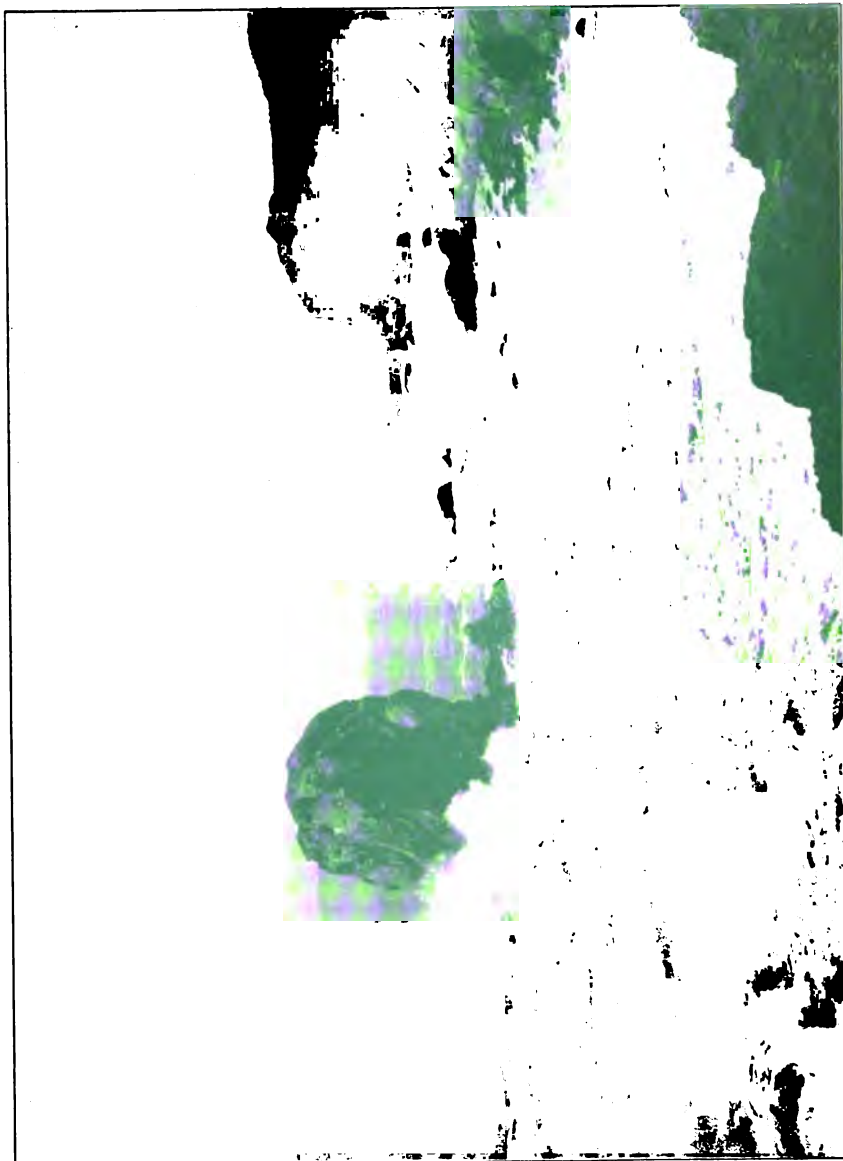
"THE POSTMAN."

OUR first article began and ended with the question, Why should the photographer continue to use an admittedly imperfect plate, when he is offered one much more nearly perfect? and we now proceed to answer it.

Professional photographers, as a class, are conservative, and perhaps it is but natural that they should be so. They have their living to get from it, and have not the time, and many of them have not the requisite knowledge, to experiment to any advantage. Nor are they as ready as they should be to take advantage of the results of the experimental work of the generally better equipped amateur, although all but the

most ignorant of them are willing to admit that it is to him that they are indebted for every discovery, and almost every step in advance that has been made.

Then, all but the few on the higher rungs are compelled, or think they are, to work for prices little better than a commercial profit on the material employed, a state of matters for which they are inclined to blame the amateur, rather than see in it the natural result of the competition incident to a business that, according to the prospectus of the Illinois College of Photography, may be learned in three or four months, at a cost of less than



ON THE PACIFIC
BY
W. E. COGSWELL

OFFICIAL REPORT
JULY 27, 1904
NO. 102

No. 717

...the reports of their con-
...of the States, held all over
...anything beyond the *practice* of
...connected
...together then, we come
...as a class, although
...the theory of photogra-
...in which it is based,
...the amateur

...the amateur as well as the
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...This is
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...a matter of lit-
...give fairly true

CHESAPEAKE LEVY
UNITED STATES
OCT 18 1898



"ON THE TOWPATH."
BY
DR. W. J. FURNESS.

No. 546.

values, with the rapid plates now at their command, need not make the exposure too long for the average sitter.

The fact, however, that the results with a screen are better than those in which it has not been employed, has associated the two together in the minds of photographers generally, so that they cannot think of the one without thinking of the other, nor get rid of the feeling that the one is the necessary accompaniment of the other. Add to this the fact that the craze for rapidity has for several years been more and more emphasized, and it will not be difficult to understand why the belief in the necessity for the use of a screen has handicapped the introduction of the orthochromatic plate.

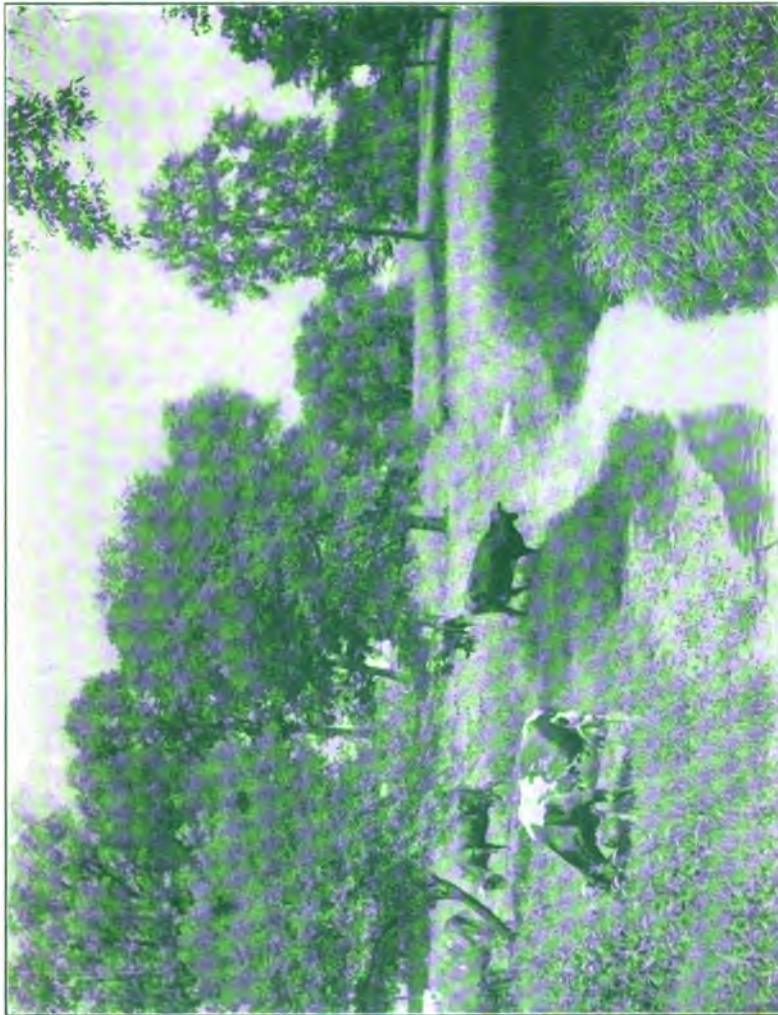
But as surely as half a loaf is better than no bread, so is the result on an orthochromatic plate without a screen better than that on an ordinary plate, and while the screen should be employed wherever rapidity is not an essential, there can be no earthly reason, when it cannot be employed, for throwing away half a benefit because one cannot get the whole.

It is just possible that the makers themselves have had something to do with the delusion as to want of keeping qualities. On the packet of Carbutt's films that we are at present working there is this notice: "They are sold without guarantee, either expressed or implied, and should be used within six months from date." There may have been some reason for this: we do not know; but that it does not mean that the films will not keep beyond that time we have positive proof, in the fact that the date is October 28, 1896, and that we have to-day exposed and developed one of them into as good a negative, so far as technique is concerned, as could be desired. We have also exposed one of Carbutt's orthochromatic plates, date not marked, but got at the same time, with an equally perfect result, so that it may be taken for granted that orthochromatic plates and films "keep" as well as the much less perfect ordinary plates and films. Again we ask the question, Why do photographers continue to use an admittedly imperfect plate, when one that is much nearer perfection is offered them at the same cost, and the manipulation of which is in every respect the same?



In an article in the *Chicago Record* on "Photographing Feathers," Edward A. Clark says, in speaking of photographing a bird on the nest: "At times the woodcock, the shyest of birds, will allow itself to be lifted from the nest and placed in a position for a better picture." This looks a little like hearsay evidence, and makes one at least doubt whether he ever tried his hand at that kind of work.

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"A PASTORAL SCENE."
BY
F. P. STREEPER.

Making Allowances.

BY HENRY WENZEL, JR.



THE longer experience one has in photography the more allowance he makes for variations in the products he employs. Especially is this true of plates and papers. He finally takes speed numbers on dry plate boxes and on actinometer speed lists, etc., as THE AMERICAN AMATEUR PHOTOGRAPHER advocates taking developing formulæ to be, *i. e.*, "indicative, not imperative." And so on with other products.

The plate maker supposes that the user of his products will make allowance for slight variations in speed; rather, he knows that he will have to do so. One large concern used to advertise a few years ago that a certain well known photographer ordered a very large quantity of a certain emulsion, the reason being that it was the fastest and best he had ever had, and he had been using their plates right along! That papers vary I need not attempt to prove, the fact being so well known and so easily noticeable, especially in products of the developing type.

Other interested persons than the plate maker are aware that his products vary, and make allowances for the variation. Wynne's actinometer speed lists rate plates according to samples tested, but the directions accompanying the meter advise testing one plate out of a batch if the actual speed of that batch is to be known. As the editor of this journal has pointed out, some allowance also must be made for variation in the speed of the sensitive paper employed in the Wynne and other meters, if accurate readings are absolutely essential, but this is not the case, for the variation in the speed of the discs is of less moment than variations elsewhere, as slight variations do not affect the exposure-time indicated to an appreciable extent.

When making an exposure allowance must be made for variations in the following factors: Subject, light, plate and diaphragm. The distance to the nearest shadows, the depth of the shadows and the color of near by objects must be taken into account.

When developing, allowances must be made for possible errors in ex-

posure, for the temperature and strength of the developer, if both be not normal, and for the tendency of the modern developer, if one of these are employed, to lose density in fixation.

And last but not least make allowances for yourself. You can't help being a bit variable yourself once in a while. If you failed the last time, look back and see where the fault lies; perhaps you'll find your mind was partially occupied by thoughts foreign to the work you had in hand. Don't fall back on photography as a relief from distracting cares and expect the best results; give to photography your whole heart and soul if you would derive from it the greatest measure of success.

From the British Side.

BY A CAMERAMAN.



HE two exhibitions, the Royal and the Salon, are now in full swing, but judging from the numbers that I found in either the one or the other during several visits, the general public do not seem to be so generally interested as might have been supposed.

Giving, for age and other reasons, precedence to the Royal, I may say at once, that, without containing anything *very* fine, it is a little better than a good average exhibition. I am told that the 368 exhibits on the walls were selected from 1,100 sent in, so that there must have been a goodly number of disappointed ones.

On a general review of the whole, several things strike me as being worth a little consideration. Notwithstanding the correspondence that was carried on in the various journals during and after the exhibition of last year, and the fact that the president at one of the meetings strongly urged the necessity of giving more attention to professional work, the professionals have not responded. The fact that the number of professional photographers exhibiting may be counted on one's fingers would seem to imply that, while they feel bound to give their less cultured sitters "the usual thing," they begin to realize that it is hardly the thing for the walls of an exhibition of art.

Then, what has become of the lantern slide makers? Only six have

responded to the invitation, and their work, mostly at least, is not of a high standard, hardly indeed above the average professional work. And yet there are many excellent slide makers in the society as well as out of it. Can it be that they have been influenced by the declaration of our friend Pringle and others, to the effect that "there is no art in lantern slides?" or are they as particular as a late exhibitor at the Camera Club, who declared that he was satisfied if he got one good slide out of a dozen plates, and did not care to spend the price of six dozen to secure the required number?

But if the slides sent in competition are hardly up to the mark, as much, or rather as little, cannot be said of those used to illustrate the interesting course of lectures delivered in the evenings. They, or most of them, are really very good and very creditable to their makers. I have no patience with those who say there is no art, or rather that there can be no art, in slides. The fact that the uncultured public like and applaud the brilliant white and black variety, and that professional slide makers cater to them, is no proof that slides of really true values cannot be made from negatives that yield artistic prints, and it will take a better head than mine to explain why a correctly made slide, from a negative that gives an artistic print on paper, is not itself artistic on the screen.*

An analysis of the catalogue shows the gratifying fact that the two best printing methods are still far ahead of all others, although the better of the two is still a little behind. Platinum leads with 118, carbon following with 111, bromide coming in a pretty far back third, with forty-three. Albumen, developed silver, and gum bichromate, are each credited with one, although "artigue," which is the elder brother of the latter, is represented by two.

Taking it all in all, the 1899 exhibition is fully up to the usual mark, and what is really wonderful, is the fact that up till now I have not heard a single complaint against the decision of the judges. True, somebody has blundered somewhere. Two medals go to America, one to Alfred Stieglitz, as usual, and one to Dudley Hoyt, but if all that I hear be true, there should have been a third, one to Rudolf Eickemeyer, Jr., but the picture that is said to so well deserve it was, nobody seems to know how, marked as not for competition.

The Salon is also an improvement on some of its predecessors. The erstwhile decorative and pictorial eccentricities are absent, or at least very much less pronounced, and although there are some pictures that leave just a *little* too much to the imagination, there is not one that I should care to miss.

The Salon does not give medals, but it gives, and gives to all comers, between the hours of 4:30 and 5:30, their afternoon tea, with the privilege

of studying as fine a collection of truly artistic photographs as ever were brought together. That our continental neighbors are ahead of us goes without saying, and that they know how to get the best out of gum bichromate is equally patent. But that does not by any means imply that our countrymen are not up to the mark. Far from it; indeed, their work is not only up to, but in most cases considerably beyond, that of former years.

In a single word, the seventh exhibition of the Salon is decidedly ahead of all its previous exhibitions, and I have no hesitation in saying that its educational influence will be as great, as good, and as telling. Picture makers by photography owe much to it in the past, and are likely to owe more to it in the future.

Notes.

AWARDS AT EXHIBITIONS.—The following, from *The Practical Photographer*, is worth attention, as corroborating much that we have written on the harm done, especially to the less experienced photographers, by the awards at a certain class of competitive exhibitions:

"It must be admitted that the personal taste of those elected to pass judgment upon the work of others has much to do with their opinion. No one, of course, can be absolutely impartial—that is outside the nature of things. But it is difficult to understand upon what basis the adjudications of some judges are made, making the widest allowance for personal taste. The recently published illustrated supplements to *The Graphic* are an interesting study for any photographer who has had any experience as a judge or on a committee of selection. On the same page we find an Alpine view of very ordinary character alongside an eastern landscape, composed of unusual elements very pictorially selected. We should have thought that no one, even a novice, would have hesitated in pronouncing the latter a cleverer piece of work. But, strange to relate, the former is awarded three guineas and the latter *nil*. Again, we notice that a very commonplace country cottage scene, with an ugly foreground and telegraph lines running right across the sky, receives a guinea, and a third-rate snap-shot, with its buildings and figures tilted half an inch out of the vertical, three guineas. We have no hesitation in saying that neither of these prints would have been considered good enough for a certificate in *The Junior Photographer*. When we come, however, to look at the pictures to which the first, second, and third prizes have fallen, singularly enough we have no fault to find. The lesson to be learned from such evidence of unwise

selection is that the competitor must not let one award determine his position."

• **THREE COLOR LANTERN SLIDES.**—From a report of a meeting of the London Camera Club, we learn that a simple and sure method of producing lantern slides in natural colors, according to Abney's definition, will shortly be put on the market.

Sanger Shepherd, who has devised the method or modification, was the lecturer, and we were sorry to see that, in speaking of the various ways in which it had been proposed to make the three-color negatives, he went out of his way to say that in that direction Ives had had but "scant success."

The report says nothing about the interior arrangement of the camera, except that it includes reflectors, but the color screens, or rather screen, is evidently a novelty. It is inserted in the diaphragm slot, is red in the center, and surrounded with rings, probably of green and blue-violet, the relative exposures being given by operating the iris diaphragm.

Along with the camera will be on sale films of thin transparent celluloid, coated with a gelatino-bromide emulsion, which is to be further sensitized by the operator, with an alkaline bichromate; and also suitable dyes with which to stain or color the developed transparencies. After development, it only remains to superimpose and, between two plates of glass, to bind the three films together, to have a lantern slide in natural colors, far more beautiful than anything ever produced by hand painting.

ANOTHER MYSTERY.—Mrs. A. L. Ballinger, of 460 Walnut street, Meadville, Pa., writes us: "The notice of the 'Camera Freak' in your October number induces me to tell you of what occurred to myself. About the middle of the day in June, 1898, I wished to photograph, first, a young lady and a kitten, and then a group of small children; and, not then knowing better, placed them in a porch rocker in bright sunshine. I had a double plateholder loaded, and exposed, first the one and then the other. On developing, one was altogether blank, the other contained only the chair without a trace of the figures. It puzzled me then, and it is still a puzzle which I shall be glad if any of the readers of the magazine can unravel."

KEEPING QUALITIES OF DEVELOPERS.—In October, 1898, we dissolved a capsule of the Haller-Kemper's Tolidol, that made purposely for the Hammer plate, in four ounces of water, and for some reason, did not use it. It stood on a shelf of our dark room till last week, a little over a year old, and had changed color only to a slight shade of red. On dilution with four ounces of water it was found as good as ever, and as good a developer as we have ever used.

PHILADELPHIA SALON.—On another page will be found a notice of the second Philadelphia Salon, from which will be seen, and as we have learned from other sources, that it has been a very great success. That our European brethren are still a little ahead of us is not matter for surprise, as they have much, very much in their favor, in climate, in greater leisure, and in having had a longer start on the road to picture making by photography. That we are overtaking them so fast as we are is something of which we may well be proud, and something that should encourage us to persevere in our efforts to be at least their equals.

We congratulate the management on the taste that has been brought to bear on the getting out of the catalogue, and the success in the selection of the illustrations. It is a triumph of printing and half-tone engraving; although we *could* have spared Miss M. Hallock, or would have been glad to see her differently reproduced.

Purple Tones on P. O. P.

BY JOHN A. HODGES, F.R.P.S.

IT is a little difficult to understand why sulphocyanide of ammonium should be so generally recommended and so largely used for the toning of P.O.P. It is an objectionable salt to employ, both from a chemical and physical point of view. There is always the risk of getting double tones, and the salt is of a very poisonous nature. In selecting a formula for a toning bath one has, of course, to consider the particular tone that it is desired to produce, and those who prefer a warm chocolate brown no doubt find they can produce that color with the sulphocyanide bath. If, however, the richer and darker tones of purple and purple-black are required, there are other baths that will yield such colors with greater ease and certainty, and without running any risk of getting double tones. One of the best and simplest of baths, and one which yields very fine tones, ranging from chocolate to purple, and even black, is the phosphate bath. It is a particularly easy one to work with, and the wonder is that it is not more generally employed. It will be found to suit most makes of P.O.P., and gives very beautiful results. Like the sulphocyanide bath, it will not keep long after being made up, and should be used as soon as it is mixed. The formula is as follows:

Phosphate of soda.....	20 gr.
Boiling water	10 oz.
When cold, add gold chloride.....	1 gr.

Stir well, and the bath is ready for use. It will probably present a milky appearance, but this is of no consequence, and it is not necessary to filter.

The following points should be carefully attended to: Wash the prints, face downwards, in several changes of water, changing the water rapidly, and keeping the prints in motion by turning them over and over. Markings and a general degradation of the whites are often caused by carelessness in the first washing—the prints are put into the washing water two or three at a time, and for a few moments are only partially wetted. This must be avoided by putting them in singly and thoroughly immersing each one, turning it over and over so as to get the entire surface at once uniformly wetted. This takes no time, and avoids waste.

A sufficient quantity of toning bath should always be used to well cover the prints, and they must be kept in motion, both by turning them over and over and by gently rocking the dish. This plan will effectually prevent uneven toning. Never attempt to tone too many prints at once. You will not save time by doing so, but you will spoil some of your prints. The phosphate bath is a quick toner, and if you want to keep your prints warm you must take care to remove them before they pass into the purple stage and while they still look reddish. For warm tones, the bath will be easier to work with if further diluted with 5 oz. of water, keeping to the same proportions of phosphate and gold. But the phosphate bath is more suited for those rich purple-black tones which many seem to have so much trouble in producing, and if decidedly warm tones are desired, the acetate bath or the sulphocyanide bath should be employed. Those who have not used the phosphate bath before will find that it is necessary to print a little more deeply than would be necessary with the sulphocyanide bath, as there is a slightly greater reducing action during toning; indeed, if very dark, cold tones, approaching to black, are required, the proofs must be considerably overprinted. When the latter tones are desired, the bath should not be diluted, and the proportion of gold may be increased with advantage up to 2 grains for the quantity of solution given. So working, black tones resembling platinum in color, but combined with the beautiful depth of shadow that so distinguishes P.O.P. from other printing processes, can be obtained. The prints are fixed in the usual manner, but the hypo bath should be neutral, and not too strong.

The final washing should be done quickly and thoroughly; prolonged soaking in still water is ineffectual in removing the hypo, and has a tendency to spoil the tone of the prints, especially when they have been developed to a cold tone. One hour's washing in running water will more thoroughly remove the hypo than several hours' prolonged soaking. If a properly constructed washing apparatus is not available, place the prints,

a few at a time, after removal from the fixing bath, in a deep dish, into which water from the tap is allowed to run gently, turn the prints over and over, changing the water rapidly, so as to remove the hypo as soon as possible. They should then be transferred to a large deep bowl—a bread-pan answers capially—into which water is allowed to run by a piece of rubber tube connected with the tap. Over the lower end of the rubber tube a piece of composition pipe, about 6 in. or 8 in. long, is slipped. The free end of the compo pipe should be closed by beating together with a hammer, and a dozen or so small holes should be bored with a fine bradawl in the tube itself. When the tap is turned on, the force of the water issuing from the small holes will keep the prints in gentle motion; and to prevent them washing out of the bowl with the overflow water, a piece of fine netting should be stretched across the top.—*Amateur Photographer*.

[P. O. P. stands for Printing Out Paper.—Eds.]

Large Direct Portraiture.

AT one of the recent meetings of the Photographic Club, when reference was made to some large direct portraits on plates 20 x 16, by Mr. Witcomb, of Buenos Ayres, a remark was made that there was a greater difficulty in getting orders for large direct work than there was in executing it. Mr. Snowden Ward, in reply, said that in the United States large direct photographs were much favored. We know also that there is a considerable business done in them on the Continent—France, Germany and elsewhere. Seeing that large direct portraiture is so much in favor, alike in the States, on the Continent, and in Argentine, and we are told by opticians, and also by dealers in second-hand apparatus, that the majority of the large lenses for portraiture they sell are for export, and not for home use, it will be well to inquire why this is the case.

It must be admitted that a *good* large direct picture—up to a certain size—has a delicacy and charm about it that is not possessed by an enlargement. Perhaps one reason why there is so little demand for this class of portrait here is that English photographers do not make such a feature of them as do their *confrères* abroad. Another reason, and probably a greater one, is that, when a feature has been made of them here, they have not been so pleasing in character as are those of the smaller sizes, owing to the violence of the perspective, caused by the camera being brought too close to the sitter through the use of lenses of too short foci, a thing

studiously avoided in the States and on the Continent. This subject has frequently been dealt with in our back volumes. Many photographers here make the mistake of using lenses on the full-size plates they will cover; although they do this with the larger sizes, they do not do so with the smaller ones, or, at least, to the same extent. For example, the most general lens for cabinets, the size of which is $5\frac{1}{2} \times 4$ inches, is one of from 11 to 12 inches equivalent focus, and when used for this size the perspective is pleasing, and this very largely conduces to the popularity of the cabinet picture; but, as most are aware, a good lens of that focus will cover a much larger plate when moderately stopped down.

The late Mr. J. H. Dallmeyer laid it down as a rule, some thirty years ago, that the equivalent focus of a lens should be at least double the longest dimensions of the plate upon which it is used, and that has never been controverted. The famous portraits by M. Adam Salomon, which created such a *furor* in the "sixties," were about 10×8 inches, for example, and were all taken with a lens of 20 inches focus. Now, what applies in the case of small pictures applies also, and in a greater degree, to large ones.

Keeping these facts in mind, we will now see how opticians catalogue their large lenses. We have now before us the catalogues of our two leading opticians, Ross and Dallmeyer. In each of these are quoted lenses, suitable for portraiture, in three series: the portrait combination, the "D" group or universal, and the rapid rectilinear or symmetrical of almost, in each list, identical foci, and to cover similar size plates. We will quote from the latter's catalogue, because in it the equivalent focus of the portrait lens is given, while in the other the back focus only is mentioned. We find there a portrait lens of 30 inches focus, a "D," or group lens, of $30\frac{1}{2}$ inches, and a rapid rectilinear of 30 inches focus, so that, practically, the three lenses are of identical foci. The first-named is catalogued to cover 20×16 , the second 18×16 to 22×20 , and the third similar sizes, and the reputations of the two makers are sufficient to guarantee that they will cover the sizes stated; but should photographers use them for the full-size plates?

Bearing in mind what has been said with regard to the smaller sizes, say the cabinet, neither of these lenses should be employed for plates larger than 15×12 if we wish to obtain pleasing results, so far as perspective is concerned, and it may be mentioned that is about the size, we find upon inquiry they are used for abroad, where large direct portraits find favor with the public. When used for sizes of half the focal length of the lens, the camera is placed at a considerable distance from the sitter, and a pleasing perspective is obtained. When, however, the lens is used for the larger size it is capable of covering, the camera has to be approached very

close indeed to the subject, perhaps to within 6 or 8 feet, with the result of violent and unpleasant, though still true, perspective, the foremost portions of the features and figure appearing to be distorted.—*British Journal of Photography*.

The Telephoto-Aerograph.

FROM an "interview" in the *Mobile Saturday Review* we learn that Mr. A. d'P. Weaver, a resident of that place, has added one more to the list of those who have sought, although hitherto without much success, by a combination of the balloon, electricity and the camera, to secure photographs of forbidden subjects for war purposes.

Mr. Weaver says: "In my device I combine the balloon, or box kite, and camera in such a manner as to enable one to take photographs of distant objects with certainty, while the camera is suspended high in the air, and where the objects are undiscernable to an observer on the ground, either on account of intervening objects or the distance." This he proposes to do by suspending the camera with telephoto lens in a peculiar framework, so that it is capable of movement in a vertical plane around a central axis, that it may be made to point down at any desired angle, readable on a graduated quadrant. Above the camera and parallel to it is a ten-foot rod with at each end an eighteen-inch light gilt ball, and above this a considerably longer aluminum wind vane revolving horizontally on a face plate graduated in degrees, and having its center over the axis of the camera.

The apparatus so arranged is suspended from a small balloon or kite and allowed to ascend to a pre-arranged height, with the camera adjusted by the graduated quadrant so as to point directly to the object to be photographed. The direction of the wind being known, it is easy to set the camera so that it will point in the direction of the object when the vane is parallel to its course, and through a small telescope on a tripod, with movements in altitude and azimuth and with cross web in the oculars, it can be seen when the gilt balls are in the right position, and the exposure made.

The balloon, or kite, is secured by a cable carrying two electrical wires actuated by a few cells of a dry battery. These are so arranged that by the simple pressure of a button the shutter may be set or opened, and the magazine mechanism operated so as to change the plates.

In speaking of the advantages of the telephoto-aerograph over the spy system as a means of getting desirable information, Mr. Weaver says:

"Under the new order of things I propose, instead of risking valuable lives in order to obtain such all-important information, to send up the telephoto-aerograph at a safe distance and secure photographs of the entire surrounding country, which photographs will furnish the desired information without loss of time or detail.

"Take the case of the elusive Cervera, who had dodged about with his squadron so effectively that we began to wonder whether Spain really had such a set of ships. Commodore Schley thought he had Cervera safely bottled up in Santiago harbor, but owing to the topography of the surroundings, he could not be certain whether the Spaniards were in the harbor or not.

"Had the flagship of Commodore Schley been equipped with the telephoto-aerograph he could, by its use, have answered these momentous questions within an hour. This is a strong statement, but one I believe to be borne out by the facts."

The Toning of Black Images.

A. D. PRETZL.

THE numerous "gaslight" bromide papers on the market, and the formulæ for obtaining warm tones, seem to point to a tendency to the warmer tone, which, though it can be obtained with certainty and ease when working with one negative under absolutely constant conditions, is not so easy when numerous negatives are printed from, and only one or two prints required from each.

The following methods, which are by no means new, but merely old ones modified as experience has proved, are the most satisfactory for toning black images, whether on paper or glass, in the form of lantern slides or transparency.

The most usual method of obtaining reddish-brown and sepia tones is by means of a uranium salt and ferridcyanide of potassium. The chemical action which takes place in toning is, of course, the formation of ferrocyanide of silver and ferrocyanide of uranium, the latter being precipitated upon the image in a form insoluble in water, but readily soluble in an

alkali; hence it is usual to acidify the toning solution, and also to acidify the washing waters. The best acid is undoubtedly acetic, because it has no action on the silver image or upon the toned image.

In all the toning formulæ which I shall treat of there is one common solution, that of the ferridcyanide, which is best made up in a 1 per cent. solution with 10 per cent. of glacial acetic acid.

The uranium salt generally used is the nitrate, but it is better to use the acetate, and a 1 per cent. solution of this, with 10 per cent. of glacial acetic acid, forms the necessary stock solutions.

The tones obtained by these solutions vary somewhat according to the proportion of the ferridcyanide and uranium, as there are two distinct ferrocyanides of uranium, which are precipitated the more readily when the above solutions are mixed in definite proportions.

For sepia tones an admixture of one part of ferridcyanide solution and two parts of uranium solution is the best; for reddish-brown tones, one part of ferridcyanide solution and one and a half parts of uranium solution; while for bright red tones equal parts of ferridcyanide and uranium solutions should be used.

There are certain precautions to be taken when using these solutions, notably, the absence of hyposulphite, and it is advisable to treat the print or image to a bath of ammonium persulphate (1 per cent.) before toning. Then, again, in toning for reddish-brown or bright red, the prints should be allowed to lie perfectly still in the dish, or otherwise some of the image, which is in a readily soluble state, may be dissolved.

Considerable variation of tone can be produced by varying the time of immersion, as, for instance, by merely immersing a print in the bath destined for bright red tones for a short time a warm sepia is obtained, but the image is certainly more liable to change when in this condition than if the proper bath is used, and the baths are so compounded as to give the correct tone, no matter how long the prints are immersed.

As I have already pointed out, these images are soluble in alkalies, and therefore it is advisable to a great extent to acidify the washing waters with acetic acid.

All the above, and the following toning solutions, are more or less sensitive to light, and should therefore be kept in the dark.

This toning process is essentially an intensification, and, should the print be too heavy when intensified, it may be reduced in intensity without alteration of color, by immersing for a short time in a 10 per cent. solution of ammonium sulphocyanide, rendered faintly acid with glacial acetic acid, which dissolves the white ferrocyanide of silver without affecting the uranium salt. This process is particularly valuable for lantern slides, as it

leaves only the uranium image, which is much more translucent than the opaque ferrocyanide of silver, hence the shadows are much clearer.

Blue or greenish-blue tones are not much sought after, but they are specially suitable for some subjects, particularly in the form of lantern slides, when they make a welcome change from the interminable blacks and browns.

The same ferridcyanide solution is used, and the second solution is a 1 per cent. solution of ammonio-citrate of iron with 10 per cent. of glacial acetic acid, and these two should be mixed in the proportion of one part of ferrid cyanide and one and a half parts of ammonio-citrate. By prolonged immersion the image becomes quite a bright blue, and for lantern slides this looks almost like a stain of an aniline dye if the ferrocyanide of silver be dissolved out with hypo, which has no effect on the blue image.

Numerous shades of pure green or greenish-blue are to be obtained by mixing the ferridcyanide, uranium, and iron solutions in equal parts, and varying the duration of toning.

For a rather rich brownish sepia there is no bath so easy to use as the ferridcyanide and molybdate of ammonia in 1 per cent. solution, in equal parts, and this has the advantage over uranium toning in that the prints can be washed in ordinary water.

Copper has been suggested as a toning agent for bromide prints, but some prints thus toned six months ago have altered considerably, so that no great reliance can be placed on the permanency of this process. The best method is to dissolve ten parts of acetate of copper in 100 parts of water, and add sufficient of a 10 per cent. solution of oxalic acid to precipitate the whole of the copper, then to pour off the supernatant liquid, and add sufficient neutral oxalate of potassium to dissolve the precipitate, adding enough water to make 100 parts in all.

An intensification process, which also gives a brownish-black image, is to bleach the image in mercuric iodide solution, and then to treat with a 1 per cent. solution of Schlippe's salt.

The various methods of lead toning are so unreliable, because of the difficulty of removing all the salts from the fibers of the paper or from the gelatine, and also because of the enormous intensification that they give, that they never should be adopted.—*British Journal of Photography*.



A PHOTOGRAPH without true values is lost labor, and true values can only be got by sufficient exposure.

Words From the Watch Tower.

BY WATCHMAN.

CIRCUMSTANCES alter cases. In "Thoughts on Grouping," in *The Amateur Photographer*, Ward Muir asks: "What family out of Bedlam ever huddles itself on the front doorstep as an ordinary course of procedure in real life?" And obviously thinks the answer should be "none;" but if he would pass along almost any of the residence streets of Chicago, Philadelphia, New York, or indeed almost any of the cities in the United States on a summer evening, he would find that families who did not were the exception rather than the rule.

* * *

What kind of a correspondent can he be who writes from Rochester, N. Y., to "Cosmos," of *The British Journal*? He says: "There is not a cut film camera on the market in the United States," and wonders "why some of the British camera makers do not come over and start branches." I should gladly welcome competition, and there are both cameras and lenses made in Europe that I should be glad to get without the fiscal addition to their cost; but let the manufacturers not be misled by the "correspondent's" statement, as the fact is there is hardly a camera on this market, except those made specially and solely for the roll-holder, that will not take cut films.

* * *

Anyone who wants to see a most striking, almost ludicrous, example of the results of the employment of a lens of too short focus, should consult the September number of the *American Journal of Photography*. On page 400 there is a photograph of a portion of a London street, or rather the sidewalk thereof, including two representatives of H. M. "Tommy Atkins," and although there is apparently only two-thirds the breadth of a not very broad sidewalk between them, the near figure stands over two and a half inches, while the other is just half that size. The title is "The English Bobby," but the only figure at all like one of those guardians of the peace is represented as only seven-eighths of an inch in height, although apparently within a few feet of the larger figure.

* * *

We are never (or at least we shouldn't be), too old to learn. Although pin-hole photography has been one of my hobbies, I really did not know until I had read the October number of *The Camera* that it was necessary to focus a pin-hole image. I must have been mistaken, however, as one of its writers devotes half a page to telling us how to do it.

Not less ignorant was I as to what might be done in forty seconds, till another of its correspondents declared that he had secured a whole range of hills, six miles away, in that short time, and with an aperture of, as near as I can calculate, $f/220$. But maybe his ideas and mine differ as to what constitutes a fully exposed negative.

* * *

The fame (?) of the "yellow press" seems to have crossed the water, as, if we are to believe one of the British photographic journals, dread of what they might be up to was the cause of the determination to send the "Shamrock" photographs to Scotland for development. This is what it says: "The challenger's doctor suggested that a camera might be included in the yacht's outfit, and Sir Thomas Lipton told him to get the best that money could buy, and as there was no saying what tricks the yellow press of America might be up to, it was resolved to send the plates to the maker of the camera in Glasgow for development." They must have greater faith in the power and influence of the so-called yellow press than we on this side have, but then they do not know it so well.

* * *

Economy is a good thing, but it *may* be carried too far, a fact that was apparently brought home to a correspondent of *Photography* (American). He tells how, to save 15 cents a dozen, he cut into four several dozens of 8 x 10, and only spoiled a few, but found it both laborious and warm. I don't know just what is to be understood by "a few," but at his estimated price of 35 cents per dozen it does not take many to eat up the saving, to say nothing of the labor and the heat, but he showed his good sense in giving up what could at best be a profitless job.

* * *

"The Dewey Week" in New York, and the photographs made or attempted therein, affords matter for thought and speculation. The editor of *The Photo-American*, in his always interesting "Chat Here and There," estimates the exposures at something over ten or fifteen millions, and adds that "the perfect weather insured good negatives." Did it? I fear that Falstaff's sack to his bread did not come within millions of the failures to the successes. I live too far away from the madding crowd to see for myself, but kind friends are not slow to let me see their successes, *and only one little print has come*. It is a portrait of Dewey himself, standing up in his carriage, a fairly good likeness, but all the rest sadly in want of exposure.

No doubt the shop windows will show many prints, all more or less passable, but if I may take the print that is made to do duty as a frontis-

piece to *Anthony's Bulletin* for November—and surely its editor would select the very best that he could get—the best is very poor. It is simply white and black, the two extreme ends of gradation without a shade of tone between.

My *Photo-American* friend says that the enormous expenditure of plates has taught us little; but surely it has taught one thing, the necessity of something larger than even $f/8$ in our hand cameras. Nothing short of $f/5$, or better still, a planar at $f/3$, will do such work in a way that is worth doing.

Interchange Lantern Slides.

HAMILTON (CANADA) CAMERA CLUB.

This club is well up in the number of its slide makers, the fifty slides having been contributed by sixteen members. The work, on the whole, is decidedly above the average of the clubs that are members of the Interchange, although it includes very few really first-class slides.

J. Gadsby's "Niagara Falls," 2, is his best, the *atmosphere* giving it a charm wanting in the others. "Presentation of Colors," 7, is considerably false in values, although it, as well as the others, are very much the better of what is sometimes called "fog," and is so often foolishly avoided. His skies generally are fogged enough to be, on the screen, something like their natural tone.

George Lee's "Homeward Bound," 8, is too dense, and otherwise spoiled by a sky of bare glass. The subject and arrangement are pictorially excellent.

H. S. Moore's "Cruise of the Yacht Club," 9, is under exposed, and needed a suitable sky; and the same may be said of "Breakers," 10, by A. C. Turnbull.

W. Thomson's "Willing Subject," 11, is effective, although a little strong in its contrasts. A longer exposure and shorter development would have given a better result.

John Berry's "At Even, 'Ere the Sun Was Set, 12, with a sufficient light, is probably the best slide in the set, and comes as near to our idea of perfection as we can reasonably expect.

H. Beckett's "Saw Bill Lake," 13, is weak and wanting in values, sky, water, and even tree trunks being bare glass. The same may be said of A. H. Baker's "Where the Winding Road Bridges the Stream," 16, and his "Hamilton Beach," 14, and "Pack Train," 15, are not much better.

J. G. Hore's "Country Road," 17, is of the "summer snow" variety, with bare glass, sky and road; as are the "Three Brothers," 18, and "Lower Falls," 19, by E. Mills.

J. H. Land does better, his "The Wasps at Home," 24, and "Among the Roses," 23, being fairly good, but the bare glass, water and sky spoil "A Modern Blondin," 20.

J. M. Eastwood is probably the club's champion slide maker, his seven slides being, with perhaps one or two exceptions, uniformly good. "In Vancouver

Park," 26, is a fine example. Not less so is "Cypress Trees," 27; and, but for the bare glass sky, "Grand Canal," 31.

J. R. Heddle's besetting sin is bare glass where no bare glass should be. His slides, without exception, are of the professional slide maker quality; sharp, clean, clear, and just the thing to evolve the applause of the popular audience. This is all the more to be regretted, as his subjects are all fine and finely arranged. The only really good slide in his thirteen is "Aground," 37, and it is better than the rest mainly because there is not a bit of bare glass in it.

J. Adams' "Effects of the Cyclone," 32, and "The Work of the Storm," 33, are both too poor and weak to be worth showing, and J. Moodie's "Rural Vista," 34, looking as if photographed when "a" the hills were covered with snow," should be relegated to the same fate.

TORONTO CAMERA CLUB.

The slides of this club represent the work of twenty-one members, and what we said of that of the Hamilton Club is equally applicable to this. While there are still a number of slides that, in consequence of false values and bare glass no club should think good enough to send into circulation, and which the selecting committee should not pass, there are a greater number that are highly creditable; and some of which the club may well be proud.

W. H. Moss' "In the Still Woods," 29, is a fine slide, and would have been better with less bare glass, and the same may be said of 16, "A Woodland Study." "Roses," 37, needed longer exposure.

In "After the Storm," 3, W. J. Watson has one of the finest slides of the set. The tumbling waves and lowering sky, sent back so effectively by the two dark figures, is an exquisite whole. Fine also are "The Bridal Veil," 27, and "The Evening Meal," 40.

E. Stanger has done nearly as well in the "Selkirks," 20, and "Roof of Snow Shed," 44, but his "Palatial Building," 4, is much too weak.

W. Holbrook, H. B. Lefroy, C. B. Hamilton, E. R. Greig and W. McTaggart are all very far too much on the bare glass side to be of interest, although most of their slides, but for that unpardonable fault, would be fine indeed.

T. C. Blogg is well up to the mark. His "Home of the Wildfowl," 33, with its faintly indicated sky, is good, as are the two dueling slides, 6 and 7, although they would be better of truer values.

R. G. Davis' "Signs of Spring," 9, is very strong and effective, as is also "Toronto Exhibition at Night," 19, but "Snow Tracks," 14, is spoiled by the large bare glass sky.

F. H. Middleton's "Good Morning," 49, is a fine example of bold, beautiful lighting, a very attractive slide.

E. E. King's "Orchids," 48, and "Chrysanthemums," 13, are both wanting in the thing that gives value to flower photography, true values.

J. J. Woolnough is far from even. His "Toronto Law Courts," 42, has a sky and roadway of bare glass, the latter as if covered with snow, and the same lack of exposure is evident in "Day Dreams," 21, the face of the figure being so weak as hardly to be made out on the screen, while "A Burst of Sunshine," 28, is just as it should be.

G. H. Jones' "Cobbler," 24, is good, and would have been much better of longer exposure, as bare arms, face and white shirt are all alike, bare glass.

H. M. R. Glover works well. His "Winter Landscape," 18, is a picture in the

truest sense. Dull and dreary in the extreme, and one almost hears the wind whistling along as he looks at the tree bending to the breeze.

Not less impressive is A. Moyer's "Suburban Fire," 26, with the steam and smoke rising from the building, watched by the excited crowd, or the real rolling water in H. D. Traill's "Rising Waves," 46, which is a beautiful example of marine work.

Fine also is the very different marine by H. Dixon, "The Yacht 'Vivian,'" 34. Here we have a fine representation of the peaceful ripple, the yacht in full sail, and taken against the light so as to secure its beautiful shadow.

Very different in style, but not less beautiful, is H. Hampshire's "Marsh," 45, with its delicate bit of cloudland, only needing a little longer exposure and its resulting truer values to make it one of the gems of the collection.

Our Portfolio.

Communications for the editors, pictures for criticism (only one print at a time), and apparatus and material for examination, should be sent to Dr. John Nicol, Tioga Centre, N. Y.

695. FRANK E. FOSTER.—"The Broken Hook." In this you have got nearer true values than in anything hitherto sent, and the design and arrangement are equally satisfactory. Indeed, we have only one fault to find with it, the oval form in which you have thought fit to print it.

696. W. M. WILLIAMS.—"Meditation." In this the result is not nearly commensurate with the effort, but it is the kind of work in which the failure does not detract from the credit. You have neither been fortunate in your model, nor made the best of what you had. She looks more like falling asleep than meditating, and the pose of the right arm is about the most unlikely that would have been taken *naturally* under the circumstances. As for the background and *entourage*, they are a good deal of guess-work. Our guess is that the logs on which the figure sits are on a shingly beach, and that their longer ends are close to the water; but if so, why is the water, as well as the stones that cover nearly all the ground, represented by white paper? And why was the lens so made to look down so as to bring the margin of that water, apparently at a distance of only a few yards, up to and almost above the level of her head? As we have said, the effort is creditable, but success cannot come without much more careful thinking out, and true values cannot be got without longer exposure or its equivalent.

697. L. E. STUART. "A Winternoon" is both W. P. and U. E.

698.—Joseph T. Smith's unnamed print is from a very much under exposed negative. Prints that represent large sheets of water by white paper are not worth notice. Expose long enough to get something like true values, and then we shall be glad to help you.

699. H. B. HAMLIN.—"When the Corn Is in the Shock" is neither a picturesque nor interesting arrangement, and the patches in the sky do not convey the idea of clouds. The exposure has been far too short, resulting in only black and white. Nothing but the title could suggest to anyone that the mass of scattered lights and the perfectly black shadows on the left is meant to represent a shock of maize.

700. JOHN T. BENNETT.—“Fall of Autumn Leaves” is not an interesting subject or suggestive of anything, and it is much too deeply printed. You should study some book on picture making.

701. DR. W. J. FURNESS.—“Evening” is a well selected subject, and only needs a ripple on the too placid water to make it complete, so far as the landscape is concerned. The sky is peculiar, and hardly to our liking, although the two masses of light lead the eye down toward what may be called the objective point, in a way that is both rare and beautiful. Still, there is about the nearly parallel and nearly vertical masses a suggestion of the mechanical that is not quite satisfactory. We should have waited till the clouds generally assumed a different formation.

702. JAMES E. GREEN, JR.—“A Study” needed more careful thinking out. The figure itself is very good, although she is made to look as if leaning against the tree immediately behind, instead of being self-supporting. One serious fault is the want of atmosphere, the something that indicates a distance between the figure and the background, for while that is so great as to bring the root of the tree upon a level with her waist, she seems as if actually in contact with it. It was also a mistake to place her vertically in a line with the tree, giving it the appearance of growing out of and up from the shoulder. These are the faults; the good qualities are the easy natural position, notwithstanding the appearance of leaning as for the support of the tree, and the fairly good values and really fine texture, especially of the drapery. You will do good work when you realize the necessity for carefully thinking out all the elements of a picture.

703.—R. M. MORRISON.—“The Coon and Rabbit” has only one serious fault, so fatal that it is difficult to understand how one who can arrange and photograph so well could have perpetrated it. We refer to the fence as a background; a six board fence, beginning at the heels of the figure and reaching to above his shoulder. Six black horizontal lines, all, except the lower, which is a little broader, of the same breadth and the same distance apart, are simply intolerable; and it is all the more regrettable, as without them it would have been a very interesting picture.

704. J. J. FINE.—The unnamed print is a good subject from the best possible point of view, a satisfactory composition in every respect, and, but for its false values, would have been a fine picture. But the sky is simply white paper, and the, what might have been a beautiful winding way, white as if covered with snow. Development with a solution much weaker in reducer might have given a better result, but the real cure is longer exposure. The foliage on the right is still too dark, yet to get what detail there is development has been pushed till sky and roadway, in the negative, are opaque.

705. W. DEARDEN.—“The Rivals,” several trees on the side of a cañon of 9,000 feet in the Rocky Mountains, but photographed so as to convey no suggestion of either their nature or situation. It is a good photograph and nothing more, and even as that, the repeating of the left marginal line by the tall bare trunk so close to it is a serious fault. With such opportunities an effort should be made to make the photograph tell something of its own story; of its situation and surroundings. We recognize the difficulty of securing the desirable atmospheric effect where all is so clear, but surely the employment of an aperture of No. 40, about $f/25.5$ is not the best way to get it. For the kind of picture we should aim at making No. 16, or even No. $8=f/11$, would be better. We shall always be glad to see examples of your work.

706. R. A. DONNALLY.—“A Morning Glory,” a pretty child seated on the ledge of an open window, surrounded with the vine which suggests the title, is better because of truer values than anything hitherto sent. It is a very good photograph, but the material might have been made more interesting, more suggestive, not quite so like having been arranged on purpose. You have thoroughly mastered the technical difficulties, even to getting true values in light drapery, and should study how to make a picture suggest much more than is depicted. See page 508.

707. OWEN MIDDLETON.—“The Kitchen Corner,” a clean orderly kitchen with the head of the house sitting in front of the stove reading the “paper,” is a very good example of the “record of fact” phase of photography; a true representation of what may be seen in thousands of a certain class of homes in the country. The values are nearly true, and would have been altogether so if the exposure had been a little longer.

708. W. E. LAURENCE, JR.—This is a case where even an under exposed snapshot is of interest as a souvenir of a popular function. It is a snap at Admiral Dewey’s carriage in the late parade in New York City, and although the exposure has been considerably under, the likeness of Dewey, as well as of the coachman and his sailor companion on the “box,” is so good that we wish you had had a lens working with a larger aperture, that it might have been better.

709. JULES A. BOURQUIN.—The unnamed print is a fairly good subject from a fairly satisfactory point of view, but the result of under exposure is so evident that it should not have been sent. Everything not directly in the light is simply dead black paper, except the sky, which is equally dead white. The print and the negative from which it was made is a waste of good material, while with suitable exposure it would have been a pretty little picture.

710. F. F. SORNBERGER.—“A Chance Shot” would be a better, indeed, really good composition, if a part of the uninteresting matter on the left was turned off, say, to about the middle of the third division of the fence, just about a third of the whole. The remainder would be a good upright picture; its only fault is want of contrast, although that is very much better than the far more common white and black, resulting from under exposure. We shall reproduce it with a line showing how we think it should have been trimmed.

711. NELLIE C. ROGERS.—“Patrician and Plebian” is a very fine photograph of nearly perfect technique that, with such excellent material, might have been made a charming picture. A pretty child, whose dress and features show that she belongs to “the better class,” is seated on the stair of some large building, beside three ragged waifs, two boys and a girl. The photography, as we have said, is excellent, but the figures show not a trace of the impressible buoyancy of childhood, only the woodenness indicative of arrangement. When next you have such an opportunity leave the children to themselves and watch till you get something worth waiting for, and when you do, don’t spoil its effect by printing under a “cushion” shaped mat, or give the print such a glossy surface.

712. WALTER L. GROSE.—You have evidently not read the regular notice at the head of this column. There is nothing to criticise in such snap-shot photographs as you have sent, where there has been no effort at picture making. There is nothing but technique to notice, and we may say that the technique of “The Shute” at Coney Island is better than that of most of that class of works. But why choose a time

when there was nothing but a beggarly account of empty benches? A photograph of such a place is of little value unless it shows it in full swing.

713. XERXES.—There is nothing to criticise in the print except that the ruin should not occupy the whole of the space, and that it is much too deeply printed. We may add, that if a print is worth sending, it should not be sent folded.

714. E. M. MILLER.—“North River,” although a good subject and arranged in strict conformity with the so-called canons of art, is unsatisfactory. With the exception of part of a tree trunk there is neither light nor shade, only a dull, almost uniform gray, in which foreground, middle distance and distance are blended together, as if in one plane. Concentration and contrast, two essentials in a picture, are both wanting, and as that applies to the others as well as to this, it is evident that you have not yet realized their necessity. A careful study of Burnet's essays would help you over the difficulty.

715. H. I. BARNES.—“Sleepy Hollow,” a little village on a point of land jutting into a sheet of water, is a pretty little photograph with one fatal fault, a purely white sky. Everything else is just as it should be. Try longer exposure and development in a solution weaker in reducer.

716. G. E. FITCH.—“Roaring Brook.” There may be in this subject material for a good picture, but not from this point or photographed as this is. The stump in the right foreground is not conducive to the picturesque; the figure is objectionable because meaningless; the lights are scattered, and, worst of all, everything on which direct light does not fall is black paper. A very much longer exposure was required, this being essentially a subject for the old rule, “Expose for the shadows and the lights will take care of themselves.”

717. W. E. COGSWELL.—“On the Pacific” has many good features and a few faults. The selection is admirable, the sky fine, and the *atmosphere* charming, but the values are false, the white foam creeping in on perfectly black sand, and what should be simply the shady side of the mass of rock, so like a human head, is merely black paper. A slower speed of shutter would possibly have remedied this, and also given the effect of motion to both foam and spray, which here are as if caught and frozen. See page 523.

718. H. K. BULL.—“Beneath Her Favorite Elm.” We have not quoted the whole of your title because it is not appropriate. The cows are not “chewing their cuds,” and the scene does not suggest that quiet repose. Rather, by their watchful look do they suggest action, although that is a small matter. More serious are the false values, and want of atmosphere. Water, unless where in shadow, is simply white, as is the sky, while the supposed elm is black, as if at midnight. Those two faults arise, as we have often said, from under exposure, so that in forcing up detail in the darker parts the better lighted become, in the negative, quite opaque. The same exposure with a larger stop, say, the next in the U. S., would have doubled the light's action and probably given something of the missing atmosphere. A print in which objects in the extreme distance are as well defined as are those in the immediate foreground, can hardly be called a picture.

719. FRANK E. BRONSON.—A man holding up a fish is hardly a subject for criticism, especially with such uninteresting surroundings. It is, however, a fairly good photograph, and would have been much better with longer exposure.

720. C. G. MOORE.—“The Pride of the Harem” is not nearly up to your general mark. Indeed, there is hardly anything good about it but the effort, and that is

worthy of all praise. The model is unsuitable. We can hardly imagine a face or expression less likely to suggest the childlike gaiety of the beauties of the harem. Then the photography is at fault. In such studies values and texture are indispensable, and here the one is false and the other altogether wanting. "The Pride of the Harem" should suggest a beauty, although not necessarily from an Anglo-Saxon's point of view, and the wrap which enfolds her head and shoulders should have a *feeling* of the soft and fleecy, neither of which are in this.

721. ANDREW EMERINE, JR.—"At the Boat" is one more of the many missed opportunities. You apparently had everything in your favor. Good sky, faultless composition, wind enough to keep the sails full; and, judging from the water, light enough, and yet of that essential feature you have starved it. The values are so false that land, sails, and most of the figures are dark as midnight. The luminosity of the water indicates at least a clear if not a brightly clear day, while all else suggests a darkness deeper than the shades of evening. For the proper representation of such a scene either a much slower shutter speed or a lens with a much larger aperture was required.

722. J. F. AMES—"Its Lazy Drift," etc., is spoiled by a horizon exactly in the middle, reflections so distinct that the print is almost equally clear whichever side is up, and with both sky and water equally white.

723. BARBARA CHANNEL—"When We Spoke Our Piece" has been lighted too directly from the front, hence the lack of contrast. The arrangement is too mechanical, too evidently forced, and the printing under an oval mask is not an advantage. It is a poor example of photography.

724. W. H. STANCHFIELD—"Sugar Loaf" has only one fault, but that is fatal, utterly false values. Instead of one second with $f/16$ and ray filter, three or four would have been necessary. To get up even what there is of middle-tints—and there is not a trace of half-darks—development has had to be pushed till high lights are scattered all over.

725. CARL C. DISTLER.—The unnamed print is in every respect an excellent photograph of a very thoughtless arrangement. Why should the young woman have her arm round the young man's neck, instead of the more natural and more becoming *vice versa*? And why should he be smiling and listening, when she is most certainly not speaking to him. Such excellent photography deserves very much more careful thought and study than this has got. This is the kind of work that we would like to reproduce if you would decide on what the figures were to do and see that they do it.

726. J. A. GLASSEY—"The Old Mill Stream" is a very good subject, not from the best point of view, the horizontal line of the old wall being an objectionable feature. Otherwise the selection is satisfactory, but the photography is not up to the mark. It is too flat and gray, and the water and sky far too white. Don't use such fancy mounts, and don't print under such partly oval masks, at least until your work is so good that eccentricity will not spoil it.

727. G. P. LESTER—"Solitude" lacks only one thing to make it a very fine picture, atmosphere, that haziness in the distance so necessary to the effective rendering of such a subject. Here the distant trees are as well defined as are those in the foreground, and there is not a trace of what is known as aerial perspective, and which gives such a charm to a picture. Probably the employment of a much larger stop would have given the desired effect, say, $f/16$. See page 511.

728. REV. J. B. BAUER.—“Taking Aim,” a pretty sportswoman on a winding way taking aim at something “up a tree,” is an excellent composition, although, personally, we had rather it had been a boy, as we do not like to associate the love of killing with a girl. The winding road, the large mass of foliage on the right, beautifully balanced by bank and fence on the left, and the light of the figure against the half-dark of the bank, intensifying the feeling of distance, all join together to make a really good picture. Its only fault is slightly false values from a too short exposure. The shadows are wanting in detail or transparency, and to get what there is development has had to be continued till what should have been half-lights and middle tints, road, sky, etc., are almost white. See page 510, also “Answers.”

729. W. P.—“An Autumn Day.” W. P. and U. P.

730. ANNA M. MILLER.—“The Old Mill,” as photographed at least, has nothing of the picturesque to recommend it. Such a large building, occupying so much space in the print, should not be photographed so nearly broad side on, and you should give sufficient exposure to prevent such masses of black as are here, and secure *some* texture in the building. Prints may be sent either mounted or not.

731. R. B. LAMSON.—“Marshland” is truer in values than most of the prints that come to us, but the shadows are still wanting in transparency, and of atmosphere there is no suggestion. An equally serious fault is the repetition of horizontal lines through the whole of the middle of the landscape, and even up into the sky. The photography is good, and would have been better with an exposure of half as long again. The selection is faulty. We think we can see a fine picture of the upright form in the left half of this subject. We reproduce this as an object lesson. See page 519.

732. FRANK B. WATSON.—“Mohawk River” is a good selection badly photographed. The water, unless where shadows fall, is simply white paper, as is also the sky, and there is a general lack of contrast and no trace of atmosphere. The same exposure, with a larger stop, might have made all the difference. Such reflections should be avoided by disturbing the water before exposure.

Our Table.

“AMATEUR PHOTOGRAPHY.” By W. I. Lincoln Adams. *New York: The Baker & Taylor Co.* The popularity of this book may be guessed from the fact that this is the fifth edition, revised and enlarged, with a number of illustrations added. The author says that he has omitted obsolete matter, but we wish that he had omitted at least one paragraph of the original introduction, that in which he says that “many improvements were soon made upon the daguerrotype; in England by such men as Fox, Talbot, etc.,” as setting aside the fact that considerable doubt now obtains in the general mind as to whether Daguerre did anything more in connection with the process that bears his name than improve the camera. There is no doubt whatever that Talbot was before him, nor that the Talbotype was not an improvement on the daguerrotype, but an entirely new and different process, a process that, slightly modified, is the process of to-day, while the daguerrotype has long been dead as a door nail.

As a guide, however, to the practice of photography, the book is thoroughly trustworthy, and tells fully and clearly all that the beginner needs to know. It is printed on heavy coated paper, the half-tone illustrations are of very high quality, and altogether it is such as we can heartily recommend to all who need such a guide.

"CARTER'S AMATEUR GUIDE AND PHOTOGRAPHIC ENCYCLOPAEDIA." This little book of twenty pages is really a *multum in parvo* of useful information that has something to say about almost everything connected with photography; a handbook of hints, many of which will be found helpful in emergencies. It tells also something about the Carter's Ink Company's photographic specialties, all of which are deservedly in high favor among photographers. We made the acquaintance of them some eighteen months ago, and have used them ever since. The Photolibrary paste is simply perfect, and its keeping qualities all that could be desired. When leaving our summer home at Point o' Woods, in September, 1898, we left a jar of it half full, and on our return in July, 1899, found it as good as ever. The Pickering Speed Tester is also in pretty constant demand, as with it we have rated the shutters of dozens of our friends, hardly one of which was found to be anything near to what its markings claimed.

We presume the booklet is to be had for the asking, and a post card sent for it to the Carter's Ink Company, Boston, Mass., will be a very well spent cent.

"PHOTOGRAMS OF THE YEAR OF 1899." Published for the Photogram, Ltd., by Dawbarn & Ward, of London. This ever welcome annual visitor comes bigger and better than ever, and there are more reasons than one why we wish that it should be bought by every photographer in the land, or at least by everyone who wishes to make pictures by photography, and still more especially by everyone who sends to us photographs for criticism; as in that case one half at least of all that come would not be sent, but those that send them now would send something very much better. In other words, we know that many prints are sent that were not worth sending, simply because their makers do not know a good print from a poor one, and are satisfied that a careful study of the pictures in this book would give them just the knowledge that they need. He who will take one good look at the pictures by Hinton and Gregor, on pages 99 and 100—and there are many more quite as good—will never again care to print from a "soot and whitewash" negative.

Then, everyone who has a pride in the progress of the nation should buy the book, as it includes considerably over a score of pictures by American authors that show that we are now not far, if at all, behind our European brethren.

Again, art has no nationality, and the true artist glories equally in the progress of all nations and likes to watch it as it goes. "Photograms of the Year" is just the thing to give him this information, as it includes not only pictures from representative men from many lands, but also brief notices of what is doing in most of them.

If "Photograms of the Year" meets with the demand it merits, it will be sold out in a very short time, and so we say to all who are willing to learn from others, and those the best of teachers, send at once for a copy. Tennant & Ward, 289 Fourth avenue, New York, have it, or will get it for you.

THE WINCHESTER ACETYLENE LAMP.—Are photographers specially interested in acetylene lamps? That depends. To those whose lines are laid in cities where electricity is laid on like water, and who can employ all of it in their work that they are able to pay for, acetylene may not be of much account; but the case is different

with those who have nothing more actinic than gas or oil. In the not so long ago, when printing out paper was in general use, and dull days meant a weary waiting for the executing of orders, acetylene would have been of little use, but, like many other aids to photography, it came just when it was wanted. The advent of the developing paper family, first shown, we believe, by Mr. Swan of carbon tissue fame, nearly thirty years ago, but not fully appreciated till the Nepera Chemical Company put its shoulder to the wheel, has created a demand for an artificial light that shall be at once actinic, uniform, and economical.

Acetylene fills the bill, and in the Winchester portable lamp we have the most convenient possible method of generating and employing it. It comes to us from its maker, Allen Winch, of the Monadnock Building, Chicago, and is really a thing of beauty, as well as of simplicity and efficiency.

Externally a two handled vase, not unlike the "loving cup" form of athletic trophy, over which is a slightly flattened globe carrying the burner, and over all an opal shade 10 inches in diameter, which, of course, is removed when the lamp is employed for printing. Of the internal arrangements we need say nothing, except that they include a cooling chamber by which the temperature is kept down, a regulating valve by which the size of the flame may be adjusted to the desired degree of intensity, a pressure regulator, thoroughly automatic in its action, and a movable receptacle into which the waste product falls, making cleaning an easy operation. So well indeed, is everything arranged, that a lamp that has burned itself out last night may be made ready to light again by less than five minutes' labor.

On our dinner table the Winchester has replaced our favorite "Rochester," as with the smaller flame and only a fraction of the heat it gives a much pleasanter light; and it has, on our desk, and by the fireside in our study, taken the place of the "German Student" that has been in constant use for over twenty years; with a degree of comfort that is easier to feel than describe, and a feeling that we should not like to have to return to oil.

But to the photographer probably the most interesting feature of acetylene is its actinism. We have not had an opportunity of going accurately into this, and of course it will depend on the relative sizes of the compared flames; but with a Sawyer's actinometer, and a one inch kerosene lamp burning at its best, we have compared the flame of the Winchester lamp, and the mean results of many experiments is that the latter is as 8 to 1 of the former. In other words the photographer who has a big order to print on Velox, Vinco, or other developing paper will, with the Winchester lamp, print it in just one-eighth of the time that he could do it with the kerosene.

Society News.

Secretaries of camera clubs, or photographic societies or associations, are respectfully requested to send to Dr. John Nicol, Tloga Centre, N. Y., reports of meetings, copies of papers that have been read before the members, or anything of general interest that they would like to appear in the journal

NEW YORK SOCIETY OF AMATEUR PHOTOGRAPHERS.

This, in both senses of the word, young society, having been founded a little over a year ago, seems to know how to get amusement as well as the more serious society work out of its meetings.

On a recent Friday evening they held, in the Hotel St. George, Brooklyn, a "Photographic Dance" and Exhibition, the second entertainment of the kind, and better attended, we understand, than on the former occasion.

The reception began at 8:15, followed, when the visitors had had an opportunity of examining the pictures, which were mostly the work of the members, by a concert of vocal and instrumental music, recitations, etc., all of which seemed to give satisfaction. At 10:30 dancing commenced, and, with an interval for supper, was kept up till "the small hours," very much to the delight of all concerned.

CALIFORNIA CAMERA CLUB.

The annual print exhibition of this club was held in the Academy of Science Building, from November 15 to December 2, and if the members responded to the invitation circular as it deserved there should have been a very extensive display. We hope to have something to say about it in our next.

PEORIA AMATEUR EXHIBITION.

Judging from the reports that have reached us, the exhibition of the Peoria amateurs, recently held in the Art League galleries of the library building, was of a high order, and seems to have given very general satisfaction. The judges were all from a distance, Miss Nellie Coover, Chicago; Mr. Van Sickles, St. Louis, and Mr. H. H. Hammond, Wyoming, Ill. Gold medals were awarded to W. S. Carter, B. C. Powers, W. P. Walker, W. H. Wycott, Grant Hood, Dr. Bellinger, Ralph West, F. C. Grant and Mrs. R. R. Bourland.

ASSOCIATION CAMERA CLUB.

MOBILE, October 25, 1899.

To the Editors:

Below you will find an item of interest, which should have been sent you a month ago, but pressure of business prevented. Yours truly,

RICHARD HINES, JR.,

Secretary Association Camera Club.

On the last of September the officers and governing committee of the Mobile Camera Club decided to disband the club, pay up its debts and go out of existence. This action was taken after mature deliberation, because of the lack of interest shown by a sufficient number of members of the club to justify the hard work being done by the secretary and other officers in behalf of the club.

The following week the earnest workers of the defunct Mobile Camera Club, all being members of the Young Men's Christian Association, organized a camera club within that organization. The meeting was held in the Association building, the handsomest of its kind in the South, recently completed at a cost of \$75,000, and the club was organized by the election of E. W. Faith, president; Charles S. Shawhan, vice-president; Richard Hines, Jr., secretary. The name selected for the club is "Association Camera Club." The officers of the new club were all active and earnest workers in the old club, and the vice-president and secretary held the same positions in the old club.

The new club begins its existence with everything provided, whereas the old club had not a permanent abiding place of its own and none of the things needful for the success of a camera club.

The new club has a beautiful meeting room, lighted by electricity, and furnished with an electric fan; an ample dark room in the basement of the building, with marble sink and fine ventilation; large exhibition room, and provision left in the upper story of the building for the construction of a studio and fine north skylight as soon as it is needed.

The membership of the new club is growing right along, and while the ladies are not admitted to membership, they are given all the privileges of members and are invited to all the meetings. The club has had two meetings this month, both well attended. At the last meeting Secretary Hines made a short address upon the technique and composition of the frontispiece of the October number of *Wilson's Magazine*, "A Pose," by Schumacher, and also gave a brief outline of the ozotype process. Miss Fonde showed some prints of her summer work in the mountains of Tennessee, and Mr. Robert Perrin displayed a number of night scenes and some landscapes printed on platinum, which were criticised by the secretary. At the next meeting it is hoped to have a lantern slide show.

The club has been organized on the broadest possible lines. There are no rules, no constitution, and all the time of the meetings is devoted to photography.

CAMERA CLUB OF NEW YORK.

The regular monthly meeting of the club was held on the evening of November 14, at its rooms, No. 3 West Twenty-ninth street.

Mr. Champney, representing the committee on awards on the cup print competition, announced that the committee had awarded the cup to Mr. Alfred Stieglitz, who had the best work.

The president announced that there was only one competition in the lantern slide cup competition, but the work was so good that Mr. Stieglitz, the judge, had awarded it to Mr. William D. Murphy.

After the reports of committees had been submitted, the matter of the club preparing a set of slides for the American Lantern Slide Interchange was taken up, and a vote passed that such a set be prepared if it was possible to do so. Then followed the question of resuming the criticism of slides at the Wednesday evening test nights, which provoked considerable discussion, until it was settled that a special committee of critiques be provided by the club to criticise, on the request of the members, either slides or prints submitted for that purpose on certain days to be named by the board of trustees.

A vote of appreciation of the work of Frank Eugene, hung on the walls, was passed, and the meeting then adjourned and members viewed in the operating rooms a demonstration of the working of Aristo platinotype paper, which was very successfully carried out by experts from Anthony & Co. They remarked that because of the acid preservative used in the emulsion, it was necessary to immerse the prints first in a solution of carbonate of soda and water, of strength about twelve grains to the ounce of water. This had the effect of changing the acid condition of the film and also dissolved out any greasiness on the surface of the film which might have come from the negative from finger marks thereon, and which was the principal cause of red spots appearing at times. From this pre-

liminary bath the prints are run through five changes of water and placed in the borax and gold toning bath. This must be tested with red litmus paper, which should turn purple. The bath must be quite alkaline. The prints in this bath tone up to a sepia or olive brown, according to the time they are kept in, in about eight minutes. They are then washed slightly in two changes of water and placed in the platinum bath, where in the course of five minutes the cold platinum tone is reached. The print is examined by transmitted light to see that there is no redness in the shadows. From this bath the prints are washed in three changes of water and next placed in a hypo fixing bath, one ounce of hypo to sixteen ounces of water, for about ten minutes. Then they are washed for an hour in running water and dried. The process as a whole appeared to be well enough where many prints were treated at a time, but would not be convenient for the worker who only has a little time at his disposal.

The exhibition of prints for the month, November 15 to November 30, hung on the wall, was the work of Frank Eugene, of New York City, a portrait artist. There were fine examples of portrait photographs among the exhibits, including a number of pictures of well-known actors and actresses.

Mr. Champney called attention to the excellent judgment used in subordinating the background, bringing out thereby in a striking degree the center of interest—the portrait.

On the night of November 17, a demonstration was given of the McDonough Process of Color Photography, illustrated by slides from the International Color Photo Co.; the lecturer was Mr. Edward P. Allen. He showed by means of a few slides how the combination of red, green and blue lines on a screen plate produced white light. The screen plates are ruled with the tri-color lines above stated in the proportion of 300 to the inch. This screen is placed before the special sensitized plate in the camera and the image is impressed upon the plate, the rays passing through lines of the screen plate and also through a special orange colored mica ray filter, located just behind the lens. The mica screen is arranged in sections to give different degrees of the orange color, according to the kind of subject to be photographed. Specially prepared plates, sensitive to red, prepared by a special process, are used. From the negative, full of lines, thus obtained, slides are made by contact and a similar positive plate ruled with the same number of lines and colors is super-imposed over it, so the lines of each exactly coincide. When they do the two are bound together and form a colored transparency. The process combines the Joly tri-color process described some little while ago, the principle of each being very similar. Mr. Allen put several views taken by him in Egypt on the screen, some showing to better advantage than others. There were interesting street scenes and sunset and sunrise pictures shown, and a number of portraits. The color rendering of some was peculiar, lacking in delicate tones the chemically stained slides so frequently shown at the club.

American Lantern Slide Interchange.

ANNUAL TEST OF SLIDES.

The annual meeting of the Board of Managers for the testing and preparation of sets of slides for the season of 1899-1900 took place at the quarters of the In-

terchange, No. 361 Broadway, New York, on the evenings of November 23 and 24. A total of 1,880 slides were submitted for examination by twenty-five clubs, about a thousand being examined the first evening, the board sitting till 1 o'clock A. M., and the balance the second night till midnight. The result netted 982 accepted slides and 898 rejected, besides the throwing out of one new club because of inefficient work, and the holding in abeyance of an older club for a lack of the requisite percentage of good slides.

The new Board of Managers elected this year is F. C. Beach, W. H. Cheney, Herbert F. Smith, W. H. Rau and John P. Zenner. All were present at both sessions with the exception of Mr. W. H. Rau, who was unavoidably detained for business reasons. The board re-elected Mr. Beach general manager. The annual statement made by Mr. Beach showed an increased balance on hand over last year and the finances to be in good condition. Eight new clubs had applied for admission and seven were admitted. Of the older clubs the following failed to send sets; St. Louis Photographic Society; Colorado Camera Club (Denver); Sacramento Camera Club; Oregon Camera Club; Hamilton (Canada) Association Camera Club; Rutland Camera Club; Akron (O.) Camera Club.

The new clubs admitted are Portland (Me.) Camera Club; St. Paul (Minn.) Camera Club; Troy (N. Y.) Y. M. C. A. Camera Club; Detroit Camera Club; Reading (Pa.) Lantern Club; Capital Camera Club (Washington, D. C.); Montclair (N. J.) Camera Club.

The active clubs now forming the Interchange are those previously mentioned and the following: The Camera Club of New York (New York City); Photographic Society of Philadelphia; Newark Camera Club; Orange Camera Club; Bethlehem Photographic Society; Lancaster Camera Club; Chicago Society of Amateur Photographers; Rockford Camera Club; Minneapolis Camera Club; California Camera Club (San Francisco, Cal.); Buffalo Camera Club; Toronto (Canada) Camera Club; Montreal Camera Club; Ottawa Camera Club; Frankford (Pa.) Camera Club; Syracuse Camera Club; Albany Camera Club; New Britain Camera Club; Brooklyn Institute Department of Photography.

The clubs having the highest percentage of accepted slides were the Camera Club of New York, the Photographic Society of Philadelphia and the Orange Camera Club. The accepted slides will be listed and grouped together in sets of 100 to 125 slides, from two to three clubs being in one box, which it is estimated will bring into circulation about ten sets of slides and enable two clubs to exhibit one set of slides a month. It will interest our readers to know that one new club was inspired to enter the Interchange after an exhibition before it of the AMERICAN AMATEUR PHOTOGRAPHER prize set of slides.

The majority of the rejected slides were so labeled in consequence of being over dense, weak or flat, not sharp, wrongly matted, or subjects that were very uninteresting.

It may be well to remark that though the new season begins on December 1, 1899, any club desiring to participate in the Interchange may send to the General Manager, F. C. Beach, 361 Broadway, New York, a set of at least fifty good slides for examination. If more than 50 per cent. of these are found to be technically good the club may then enter. The accepted slides will not be placed in circulation until the following season.

On November 18, Box No. 10, of the American selected slides (100 in all) was sent to the Photographic Society of the North of France, at Douai, France, for use

before the French societies. In exchange it is expected a box of French slides will be received during the course of the season, as well as a box of English prize slides from *Photography*.

Recent Patents and Trade Marks.

The following digest of patents is furnished by Davis & Davis, patent solicitors (successors to Alexander Davis), Washington, D. C., from whom copies of patents may be had.

JOHN W. MEAKER, JR., Waukegan, Ill.

Negative Rack. No. 632,876.

A V-shaped sheet metal frame is formed, and from arms of said frame outward and upward extending negative-supporting fingers are struck. At the base of each finger a notch is formed to receive the inner edge of the negative.

J. L. ATWATER, assignor to Vive Camera Co., Chicago, Ill.

Multiplying Attachment for Cameras. No. 633,980.

Consists of a revoluble multiple exposer adapted to fit into the light-opening of the camera and to be turned therein, and having a light-opening at one side of the center of the light-opening of the camera.

PAUL HENNEKE, Berlin, Germany, assignor to Dr. Ludwig Ellon & Co., Charlottenburg, Germany.

Process of Simultaneously Developing and Fixing Photographic Plates.
No. 634,137.

The process consists in treating the exposed photographic gelatine plates, films or papers with a solution containing an alkaline compound or alkaline compounds of procatechin and a fixing agent, especially a thiosulphate (hyposulphate) or thio-sulphates.

AUGUSTE LUMIERE and LOUIS LUMIERE, Lyons, France.

Photographic Apparatus. No. 634,560.

The apparatus is for projecting chronophotographic pictures, and comprises a band carrying the pictures, a liquid prism consisting of two movable glass plates joined together by a flexible frame containing the liquid, means for moving the band and means for oscillating the glass plates toward and from each other so that they will lie in planes converging upwardly in one position and then downwardly in another position.

JOHN C. CHORLEY, Warrington, England.

Method of Producing Cellulose Films for Photographic or Other Purposes.
No. 634,571.

The method of producing cellulose films of any desired length by a continuous operation which consists in supplying viscose in a slowly moving, evenly distributed

layer or film, heating and drying said film and subjecting it to the action of the brine to decompose the viscose and regenerate the insoluble cellulose in film form.

CHAS. W. H. SMITHERS AND A. A. KELLY, Fond du Lac, Wis.

Film Developing Apparatus. No. 634,631.

Upon a vertical support a glass roller is mounted on a horizontal shaft and is adapted to be rotated by a suitable hand wheel and belt. A receptacle is vertically adjustable on the support below the glass roller, and in this receptacle is mounted a roller whose axis is parallel with the axis of the glass roller.

J. H. CLARKE, Framingham, Mass.

Developing Tray Rocker. No. 634,639.

A rocking support is formed of a small piece of material, having the lower edges of the sides covered to form the rockers; the upper surface connecting the rockers and being provided with an opening to receive the developing tray.

THOMAS R. DALLMEYER, London, Eng.

Camera. No. 634,881.

Within the camera is rotatively mounted a mirror which crosses the axis of the lens tube at an angle of 45 degrees. Plate holders are arranged round the sides of the camera and the mirror is revolved to reflect the object upon the desired plate.

E. G. GOODELL & W. B. HASKINS, Detroit, Mich.

Locking Attachment for Roll-Holding Cameras. No. 636,036.

A spring-actuated dog normally engages the shutter-operating lever and locks said lever against any movement. This dog is caused to release the shutter mechanism by the rotation of the film feeding roll.

B. H. CARLTON and E. F. HATHAWAY, assignor to Rochester Camera & Supply Co., of Rochester, N. Y.,

Shutter. No. 636,224.

This shutter is provided with means for instantly opening it to make an exposure, and for temporarily holding it open during the exposure, and for then instantly closing the shutter. Means are provided whereby the period during which the shutter remains open may be varied.

Answers to Correspondents.

Correspondents are requested to notice that communications intended for the editors should be addressed to Dr. John Nicol, Tioga Centre, N. Y.

J. MORRIS TODD.—Your friend is right, and you and the *Encyclopædia Britannica* are wrong; indeed, the latter contradicts itself, as you will find if you read the article immediately preceding the one to which you refer. The actinometer there

described is really a thermometer, as it is intended to measure the heat of the sun's rays, whereas the object of the true actinometer is to measure, not the heat or the luminosity, but the actinism; that is, the energy that does work, such as producing the latent image on the photographic plate. A photometer, on the other hand, is, as the name implies, intended to measure, not the heat or the chemical action, but the light, or luminosity of light.

J. B. BAUR.—We have never spoken against the use, only against the abuse, of the hand camera. In the hands of those who know its limitations, and will keep within them, it is simply invaluable; while, when they are exceeded, which they are in probably 90 per cent. of all the exposures that are being made, it is simply a waste of material. The most important feature of a photograph is true values, and true values cannot be got without sufficient exposure.

W. L. WYMAN.—For information regarding the "World Wide Print Exchange" apply to its secretary, F. R. Archibald, Rock Creek, O. In future please attend to the notice at the head of this column.

W. FENTON.—We have repeatedly said that we do not give the address of our correspondents, but are glad to forward such letters as may be addressed to any of them, under cover to us.

R. H. SAMPSON.—We have not experimented with the "absorption" method of printing, but mean to do so shortly, and report.

J. G. STEEN.—The same suggestion has been often made, but there are practical difficulties that make the appearance of the print and its criticism in the same number impossible. We criticise more in one number than the journal you name does in a dozen. If the criticism is worth anything, it is worth the little trouble of turning to a back number, and the numbering of the prints makes that easy. Before adopting the present plan we invited suggestions from our readers, and it was the best that was at the same time practical of over a hundred that came.

R. MACKENZIE.—We cannot, in this column, give you all the information you ask. You will find it and more, much that you will be the better for knowing, in the first number of the *Photo-Miniature*, published by Tennant & Ward, 289 Fourth avenue, New York.

W. L. JACKSON.—Your predecessor could not sell you what did not belong to him. The negative was his, just as the type with which this is printed belongs to the printer; but the printer could not print and sell copies of the journal without the consent of the publisher, nor could your predecessor print from the negative without the consent of the lady for whom it was made. It is bad policy to quarrel with a customer, even when you may think you are in the right. It is always better to "let go the doubtful penny."

LANTERNIST.—We have tried several generators without perfect satisfaction, but expect another in a few days, and after submitting it to a thorough trial shall report; and from what we already know of it, think it will be strongly in its favor.

MARY FREEMAN.—The correspondent lives in Scotland, but we have forwarded your letter, and you will doubtless hear from him in due course.

S. F. MARBURY.—A change in the size of stop will sometimes change the focus of the lens, but not to the extent that would require the focusing scale to be

"changed backwards and forwards eight times, and to the extent of half an inch." Only two possible causes occur to us; either an unusual contraction and expansion of some parts of the camera, or some curious physiological irregularity on your part.

Thanks for the typical southern views; they are good examples of a phase of photography not less interesting than the pictorial.

W. S. THOMAS.—We leave the deposit in the combined bath, decanting as much of the clear solution as may be required, till it has accumulated so as to come off with what is being decanted. As a rule, we filter each time that we add a fresh supply to the old. The deposit does not interfere with the toning action.

R. MILLISON.—You have mistaken the object of "Our Table." We never compare one thing with another, and never endorse material or apparatus that we have not examined or tried. If you care to send the generator, we shall be glad to notice it, but will say of it just what we think it deserves.

MARY CRAIK.—A lens is long or short focus, depending on the size of the plate on which it is employed. Your lens of eight inches will give the best perspective on a 4 x 5 plate, but is decidedly too short for 7 x 5, that is for ordinary pictorial work. Wide angle lenses may be employed with advantage, but only where you cannot get far enough away from the subject for one of narrow enough angle.

TIME IS MONEY.—Surely you can find for yourself which of the two papers is the faster. We are always willing to help our readers, but cannot spare time to make experiments that they can so easily make for themselves.

AMATEUR OPTICIAN.—We are sorry to disappoint you, but there is no need to send the instrument, as we know without seeing it that it will not do what you say. True stereoscopic effect cannot be got from two prints exactly alike. We do not advise regarding patents.

ELIZA JORDON.—Never mind what your mathematical friend says, a 10 per cent. solution in the sense that you want it, is a solution each ten drops of which contains one minim or one grain of the material dissolved, and is correctly made by adding a cipher to the number of grains or minims, and filling up with water to that amount.

W. BENT.—Yes, we understand that the "new developer," kachin, is our old friend pyrocatechin in a new form, and the formula on page 322 of our August number will be found to work well, only a full exposure must be given.

C. E. ULRICH.—The stain is probably caused by the paper having been touched by a hypo finger or from a spark of hypo solution having fallen on it. We do not know of any printing out paper faster than most of the ordinary so-called "aristo"; but hope in our January number to give an account of a new sensitizing solution that will be rapid enough to print out by artificial light. The makers of the shutter will thank you to return it for adjustment, as we know that they do not mean to send out anything that is not perfect. The same applies to the print meter, which should be returned to Anthony & Co.

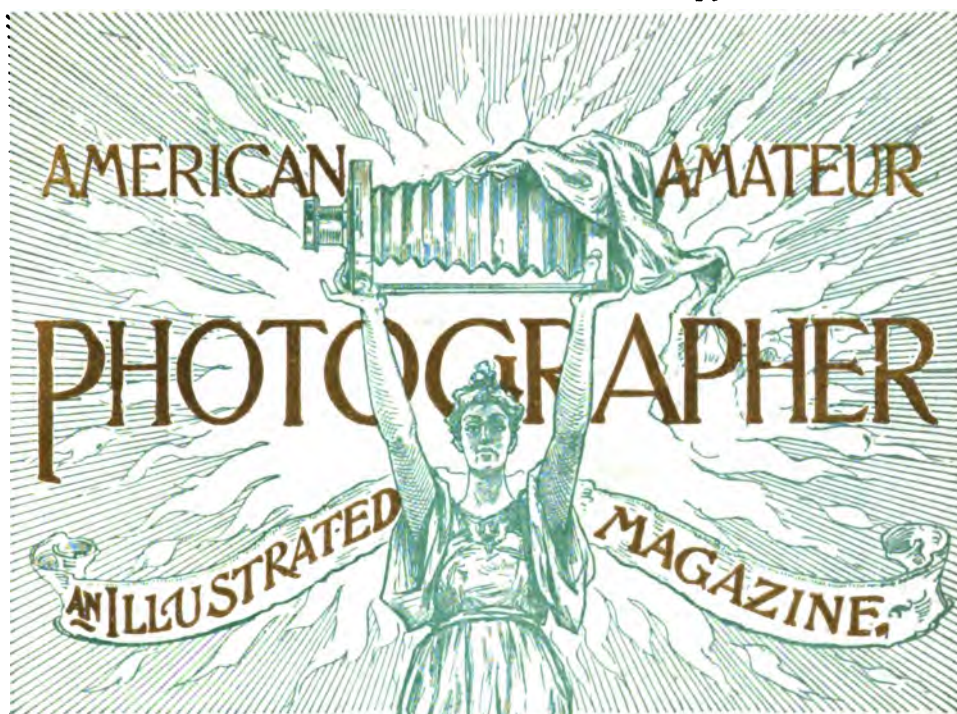
C. B. BOLLES.—To send you the names and addresses of all who send prints to the AMERICAN AMATEUR PHOTOGRAPHER is rather a large order, and you do not even send stamps to cover postage. We do not give the names of our contributors, but will forward to them such letters as may be sent under cover to us.

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DECEMBER, 1899.

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A Monthly Review of Amateur Photography.

VOL. XI.

NEW YORK, DECEMBER, 1899.

No. 12.

JOHN NICOL,
F. C. BEACH.

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ASSOCIATE EDITOR.

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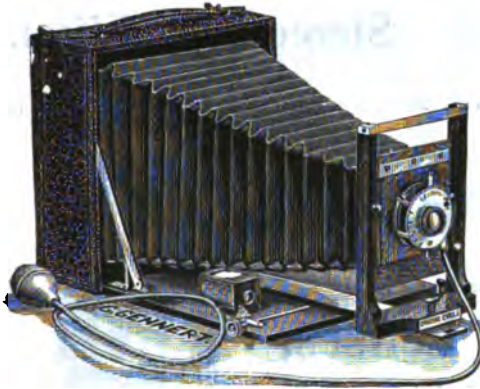
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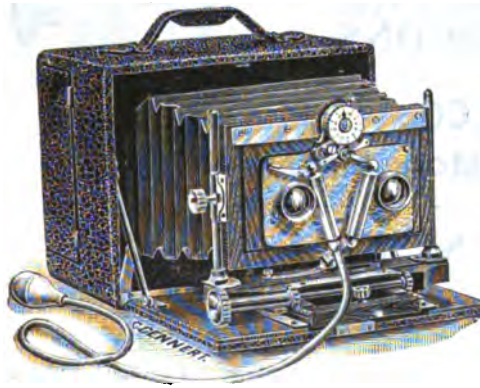
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